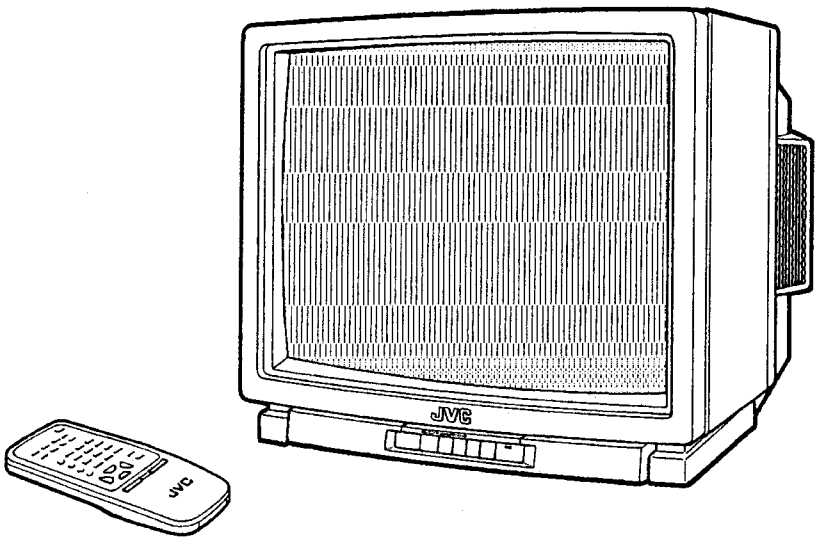
JVC

SERVICE MANUAL

27" COLOR MONITOR / RECEIVER

AV-2771S(US)

BASIC CHASSIS
GX I



(NOTE)
Electrical components having special safety-related characteristics are identified by shading (▒) on the schematic diagram and by "⚠" on the parts list in SERVICE MANUAL. When replacing these components, by sure to use designated parts.

CONTENTS

■ SPECIFICATIONS 2
■ SAFETY PRECAUTIONS 3
■ OPERATING INSTRUCTIONS 4
■ TECHNICAL INFORMATION 20
■ SPECIFIC SERVICE INSTRUCTIONS 24
■ SERVICE ADJUSTMENTS 27
■ PARTS LIST 37
※ STANDARD CIRCUIT DIAGRAM (APPENDED)

No.50577
Jul.1991

SPECIFICATIONS

Item	Content
External dimensions	25-3/4"(Width) × 22-3/4"(Height) × 20-1/2"(Depth)
Weight	84.9lbs (38.6kg)
Power requirement	AC120V, 60Hz
Power consumption	147W (Max.), 103W (Avg.)
TV Reception system	
RF system	CCIR(M)
Color system	NTSC system, BTSC system (Multichannel sound)
TV receiving channel / frequency	
VHF Low band	2~6 / 54MHz~88MHz
VHF High band	7~13 / 174MHz~216MHz
UHF band	14~69 / 470MHz~806MHz
CATV receiving channel / frequency (Quartz synthesizer system)	
Low band	2~6 (02~06)
High band	7~13 (07~13)
Mid band	A~I (14~22)
Super band	J~W (23~36) / 54MHz~804MHz
Hyper band	W+1~W+28 (37~64)
Ultra band	W+29~W+84 (65~94, 100~125)
Sub Mid band	A8, A4~A1 (01, 96~99)
TV / CATV total channel	180 channel
Intermediate frequency	
Video IF carrier	45.75MHz
Sound IF carrier	41.25MHz (2nd : 4.5MHz)
Chroma IF carrier	42.17MHz
Color sub carrier	3.58MHz
Picture tube	27-inch diagonally measured, In-Line type Full-Square tube
Viewable picture size	Width : 22"(55.6cm), Height : 16-1/2"(41.8cm)
High voltage	29kV (at zero beam current)
Focus voltage	Approx. 9.4kV
Audio power output	3W+3W (8Ω)
Speaker	3-3/16inch×4-3/4inch oval (×2)
Antenna input	75Ω (VHF/UHF in common) F-type connector
External video input	Video : 1Vp-p, 75Ω, RCA-pin connector Audio : 500mVrms (-4dBs), high impedance, RCA-pin connector
Line output	Video : 1Vp-p, 75Ω, RCA-pin connector Audio : 500mVrms (-4dBs), low impedance (400Hz when modulated 100%), RCA-pin connector
S-VIDEO input	Y :1Vp-p, positive (negative sync, provived, 75Ω) C : 0.286Vp-p (burst signal, 75Ω)
Variable audio output	More than 0~1550mVrms (+6dBs), low impedance (400Hz when modulated 100%), RCA-pin connector
External speaker terminals	Impedance : 6~8Ω
Tube	1
ICs	33(in TV), 1(in Remote control unit)
Transistors	89(in TV), 2(in Remote control unit)
Fuses	⚠QMF66U1-5R0S (5.0A) ⚠QMF53U1-1R25S (1.25A) ⚠QMF53U1-2R5S (2.5A)
Accessories	Remote control unit (RM-C687) AA-size dry cell battery ×2

Design & specification subject to change without notice.

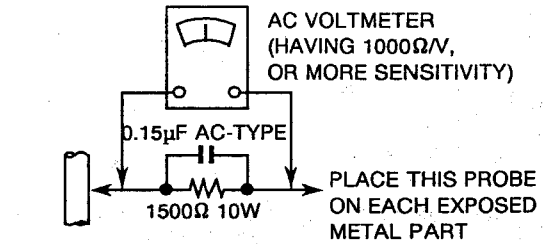
SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection,no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual many create shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contrained in some products are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some products when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and NEUTRAL side grounding or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE (⊥) side GND, the NEUTRAL (⏚) side GND and EARTH (⏚) side GND. Don't short between the LIVE side GND and NEUTRAL side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and NEUTRAL side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B_1 setting should be checked or adjusted (See ADJUSTMENT OF B_1 POWER SUPPLY).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approvided by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs,metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1100V AC (r.m.s.) for a period of one second.
(. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

(2) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.) Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

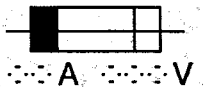
• Alternate Check Method
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement, Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item **"How to check the high voltage hold down circuit"**.

■ ONLY CANADA

This mark shows a fast operating fuse, the letters indicated below show the rating.



OPERATING INSTRUCTIONS

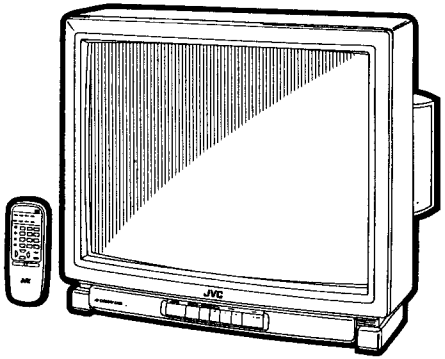
JVC

INSTRUCTIONS

AV-2771S

COLOR MONITOR/RECEIVER

AV COMPU LINK MASTER COMMAND Ai PIP picture in picture

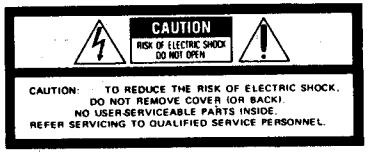


JVC®
JVC COMPANY OF AMERICA
DIVISION OF US JVC CORP.
41 Slater Drive, Elmwood Park, N.J. 07407

Printed in Japan
AV2771S-US-IBA
(A)1

For Customer Use:
Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.
Model No. AV-2771S
Serial No.

SAFETY PRECAUTION



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS TV SET TO RAIN OR MOISTURE.

Caution:
Changes or modifications not approved by JVC could void the user's authority to operate the equipment.

CAUTION: TO INSURE PERSONAL SAFETY, OBSERVE THE FOLLOWING RULES REGARDING THE USE OF THIS UNIT.

1. Operate only from the power source specified on the unit.
2. Avoid damaging the AC plug and power cord.
3. Avoid improper installation and never position the unit where good ventilation is unattainable.
4. Do not allow objects or liquid into the cabinet openings.
5. In the event of trouble, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

Caution:
When you do not use this TV set for a long period of time, be sure to disconnect the power plug from the AC outlet for your safety. If the TV set is plugged into an AC outlet, a small amount of current is applied to the TV set even if the TV set's power is turned off.

Thank you for purchasing a JVC color monitor/receiver (TV).
Your JVC TV carries many useful features including the MASTER COMMAND Ai system which allows operation of all TV functions via a single remote control unit.
To ensure your complete understanding, please read all instructions in this booklet before operation.

FEATURES

- 27-Inch FS (Full-Square) picture tube.
- Comb filter for improved picture quality.
- 180-Channel cable-compatible frequency synthesizer tuner with built-in MTS decoder.
- Video Noise Reduction circuitry to eliminate on-screen picture noise.
- Notch filter for preventing dot-interference at picture edges.
- S-VIDEO input terminal for taking best advantage of Super VHS.
- Video/audio input, line output and variable audio output terminals.
- Surround sound capability with external speaker terminals.
- MASTER COMMAND Ai remote control with multi-color on-screen "Menu" display, allowing interactive, total TV operation.
- AV COMPU LINK terminal allows simultaneous mode switching of the TV and connected receiver (or amplifier).
- Picture-In-Picture for viewing an additional program, even from an external video source, displayed as a sub (inset) picture within the main pecture.

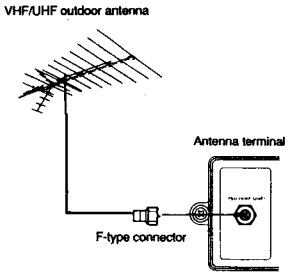
CONTENTS

Installation 3
Remote Control Use 3
Controls And Their Locations 4
TV Operation 4
Function Buttons 6
Menu Button 8
Picture-In-Picture 21
More Useful Functions 22
3-Way Mode Selector 23
Connecting To External Equipment 26
Before You Call For Service 31
Specifications 31

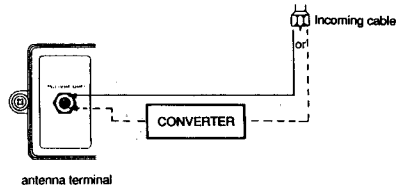
INSTALLATION

ANTENNA CONNECTIONS

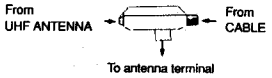
An outdoor antenna is recommended for good TV picture reception. (For installation of the outdoor antenna system, consult your local dealer.)



CABLE TV CONNECTIONS



- Some cable companies require a converter box to receive all available programs. Others may require it for subscription or "premium" programming. Consult your local cable company for correct installation.
- When connecting both a cable (75-ohm coaxial) and a UHF antenna (300-ohm feeder), use the optional antenna mixer (CE41467) to make a single connection.

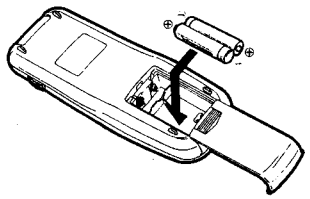


Note: With this antenna mixer, reception of cable channels higher than "Channel W + 17" is not possible.

REMOTE CONTROL USE

Correct Use

- Point to the Remote Control sensor of the TV set.
- The maximum operable distance is approximately 23 ft (7 meters) from the Remote Control sensor, and no more than 30° to either side of center.
- Operation of the Remote Control is most effective when there is nothing between it and the Remote Control sensor.
- Duration of the batteries is approximately 6 months to 1 year. (Duration varies depending on frequency of use.) Replace the batteries when the remote operation becomes unstable.



Battery Installation/Notes

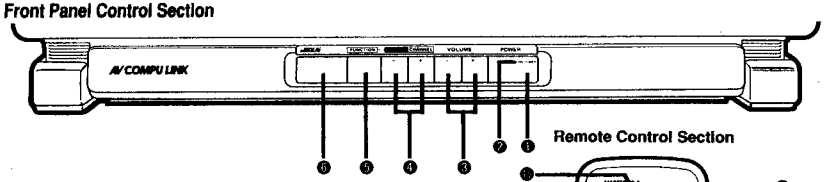
- Press the tab and lift up the cover in the direction of the arrow.
- Correctly install the batteries, observing (+/–) polarities as shown.
- Do not use a combination of old and new batteries or batteries of different types.
- If batteries become exhausted, remove and replace them soon.
- If Remote Control will not be used for more than 2 weeks, remove batteries.
- When battery leakage occurs, clean the battery compartment with a soft cloth and replace the batteries.
- When the batteries are replaced with new ones, the memory of a manufacturer code which has been programmed for the operation of a VCR or CATV converter of a manufacturer other than JVC is automatically cancelled. Therefore, after replacing the batteries with new ones, it is necessary to re-program the manufacturer code. (See "3-WAY MODE SELECTOR" on page 23 for programming.)

(No.50577) 5

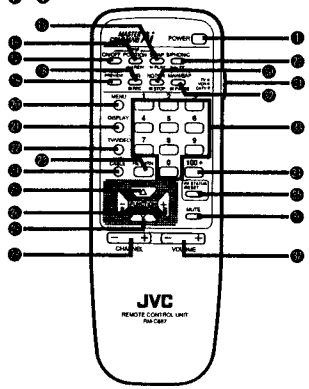
AV-2771S

CONTROLS AND THEIR LOCATIONS

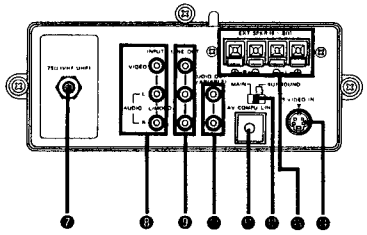
Front Panel Control Section



Remote Control Section



Rear Panel Control Section



❶ POWER button
❷ POWER/ON TIMER indicator
❸ VOLUME (–/+) buttons
❹ LEVEL/CHANNEL (–/+) buttons
❺ FUNCTION button
❻ Remote Control Sensor
❼ Antenna terminal
❽ VIDEO/AUDIO INPUT connectors
❾ LINE OUT connectors
❿ AUDIO OUT (VARIABLE) connectors
⓫ AV COMPU LINK terminal
⓬ EXT SPKR switch
⓭ EXT SPKR terminals
⓮ S-VIDEO IN connector
⓯ SWAP (PLAY) button*
⓰ PIP POSITION (REW) button*
⓱ PIP ON/OFF button
⓲ VNR (REC) button*
⓳ CATEGORY PREVIEW button
⓴ MENU button
㉑ DISPLAY button
㉒ TV/VIDEO button
㉓ RETURN button
㉔ ANT/CABLE button
㉕ FUNCTION back button
㉖ FUNCTION (–/+) buttons
㉗ FUNCTION forward button
㉘ CHANNEL (–/+) button
㉙ BIPHONIC (FF) button *
㉚ NOTCH (STOP) button*
㉛ 3-Way mode selector
㉜ MAIN/SAP (PAUSE) button
㉝ 10-Digit keypad
㉞ 100+ button
㉟ AV STATUS/RESET button
㊱ MUTE button
㊲ VOLUME (–/+) button

Please refer to the above numbers on the following pages.

* Buttons with * mark function as designated below those buttons instead of their regular functions when the 3-way mode selector is set to the VCR mode.

** Some buttons may function differently from those designations depending on the setting position of the 3-way mode selector. Refer to "3-WAY MODE SELECTOR" on page 23.

TV OPERATION

First Preparations

- **Connect either Antenna or Cable TV** by following "INSTALLATION" instructions on page 3.
- **Insert batteries into the Remote Control unit** by following "REMOTE CONTROL USE" instructions on page 3.
- **Connect the power cord** to 120 V, 60 Hz AC outlet. The power cord is supplied with a polarized plug. Therefore, it will only insert one way into the wall outlet. DO NOT DEFEAT THE POLARIZED PLUG. If you have difficulty, consult your local dealer.
- **Set the 3-way mode selector at the upper right of the Remote Control to the "TV" position.**

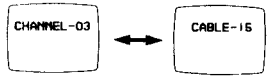
Basic Operating Procedure

1 **Press POWER button** ❶ on either the Remote Control or front panel. POWER/ON TIMER indicator ❷ lights. Press this button again to turn the power off.

Note: If the POWER/ON TIMER indicator remains lit even after the power is turned off, it shows the DUAL ON TIMER is in operation. See "6. DUAL ON TIMER" on page 12 and "4. HOME SITTER" on page 10.

2 **Press TV/VIDEO button** ㉒ on the Remote Control (or the FUNCTION and LEVEL/CHANNEL (–/+) buttons on the front panel) to select the TV mode.

3 **Press ANT/CABLE button** ㉔ on the Remote Control to select the broadcast mode. Each time it is pressed, the mode is switched between "CHANNEL" and "CABLE".
When connected to an antenna, select "CHANNEL" mode for normal VHF/UHF reception. When connected to cable TV, select "CABLE" mode. The on-screen display will show the following:



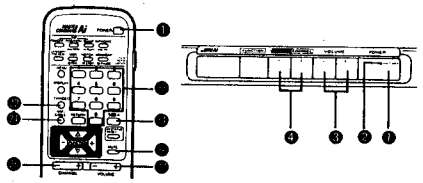
Note: • For mode selection using the front panel controls, see "FUNCTION BUTTONS" on next page.

4 **Select desired channel** using CHANNEL (–/+) buttons ㉘ on the Remote Control (or LEVEL/CHANNEL (–/+) buttons ❹ on the front panel). Pressing the (+) button advances to higher channels, (–) button to lower channels.

Note: Certain channels have been preset at the factory. It may be necessary to add or erase some channels in your areas. See "9. INITIAL SET-UP" on page 15 for presetting channels.

- Channels can be selected directly by using 10-digit keypad ㉝ on the Remote Control. For example, if you select Channel 5, press "0" first, then press "5". (Be sure to press "0" first, beforepressing "5" for Channel 5.) For cable channels of 3-digit numbers, use 100+ button ㉞. For example, if selecting Channel 120, press the 100+ button first, then press "2", then "0". Also refer to the "CABLE TV CHANNEL CONVERSION CHART" below.

Notes: • When a video source such as a VCR is connected to the antenna terminal to be viewed on Channel 3 (or Channel 4), sometimes channel selection may result in an unclear or distorted picture. In this case, re-select Channel 3 (or 4) and the picture will become clear. (Also in this case, be sure to press "0" first, before pressing "3" (or "4") for Channel 3 (or Channel 4).)
• In the VIDEO mode, if either CHANNEL (–/+) button is pressed, the mode is switched to the TV mode.



5 **Press VOLUME (–/+) buttons** ㊲ on either the Remote Control or front panel to adjust volume to your desired listening level. Pressing the (+) button will increase sound volume, the (–) button will decrease sound volume. The volume level is indicated on the screen by reference numbers (0 – 50) and by a bar scale as shown.

Note: The volume level can be muted instantly by pressing MUTE button ㊱ on the Remote Control. See "MUTE Button" on page 22. Also, a mute level setting is possible. See "7) SET MUTE LEVEL" of "9 INITIAL SET-UP" on page 18.

On-Screen Display

- Once the on-screen display appears on the screen, it disappears in a few seconds. (Only the clock time can be kept displayed on the screen. See "DISPLAY Button" on page 22.)
- When tuned to a channel where no program is being broadcast, the on-screen display may be unclear or blurred.
- On-screen displays are available in two different layouts (except for displays of the channel number and clock time). See "6) MESSAGE STYLE" of "9. INITIAL SET-UP" menu on page 17 for selecting the display mode.
- Channel numbers of the "CATEGORY PREVIEW" can be displayed with their station call-letters. If you prefer to do so, enter the station call-letters when you program channels under "CATEGORY PREVIEW". See "8) SET CATEGORY PREVIEW" of "9. INITIAL SET-UP" on page 18.

CABLE TV CHANNEL CONVERSION CHART

In addition to normal TV reception from an antenna for VHF (Channels 2 to 13) and UHF (Channels 14 to 69), your TV set is equipped to receive non-scrambled cable TV channels. Sub-Mid band (A-8, A-4 to A-1), Mid band (A to I), Super band (J to W), Hyper band (W+1 to W+28) and Ultra band (W+29 to W+84) can be received by using the channel selections as shown in the following chart.

*	A-8	A-4	A-3	A-2	A-1	A	B	C	D	E	F	G	H	I	J	K	L	M	N
**	01	96	97	98	99	14	15	16	17	18	19	20	21	22	23	24	25	26	27
*	O	P	Q	R	S	T	U	V	W	W+1	W+2	W+3	W+4	W+5	W+6	W+7	W+8	W+9	W+10
**	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
*	W+11	W+12	W+13	W+14	W+15	W+16	W+17	W+18	W+19	W+20	W+21	W+22	W+23	W+24	W+25	W+26	W+27	W+28	W+29
**	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65
*	W+30	W+31	W+32	W+33	W+34	W+35	W+36	W+37	W+38	W+39	W+40	W+41	W+42	W+43	W+44	W+45	W+46	W+47	W+48
**	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
*	W+49	W+50	W+51	W+52	W+53	W+54	W+55	W+56	W+57	W+58	W+59	W+60	W+61	W+62	W+63	W+64	W+65	W+66	W+67
**	85	86	87	88	89	90	91	92	93	94	100	101	102	103	104	105	106	107	108
*	W+68	W+69	W+70	W+71	W+72	W+73	W+74	W+75	W+76	W+77	W+78	W+79	W+80	W+81	W+82	W+83	W+84		
**	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125		

* : Regular cable channel designations
** : Your TV set's corresponding on-screen CABLE channel numbers

Note: Reception of channel A-5 ("95" of the TV set's on-screen CABLE channel numbers) is not recommended for your TV set.

FUNCTION BUTTONS

* Set the 3-way mode selector to the "TV" position.

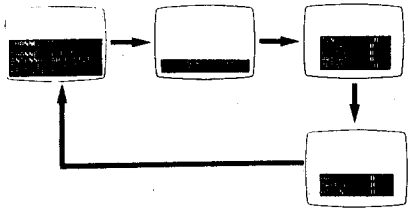
The FUNCTION button on the front panel selects the control modes for TV operation and picture/sound adjustment.

- Press FUNCTION button ❺ on the front panel. The first time it is pressed, the following display appears on the screen.

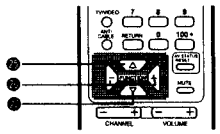
- At this time, the top line shows the current channel number.

  Press FUNCTION button ❺ to select the desired item for adjustment. Each time the FUNCTION button is pressed, the magenta-colored portion shifts in the order below to show that the colored item in the list can be adjusted.

  Note: Four pages of on-screen displays are available with the FUNCTION button.



1 CHANNEL SELECT mode ←
↓
2 ANTENNA/CABLE SELECT mode
↓
3 TV/VIDEO SELECT mode
↓
4 MTS SELECT mode
↓
5 VNR ON/OFF mode
↓
6 NOTCH ON/OFF mode
↓
7 TINT adjustment mode
↓
8 COLOR adjustment mode
↓
9 PICTURE adjustment mode
↓
10 BRIGHT adjustment mode
↓
11 DETAIL adjustment mode
↓
12 BASS adjustment mode
↓
13 TREBLE adjustment mode
↓
14 BALANCE adjustment mode

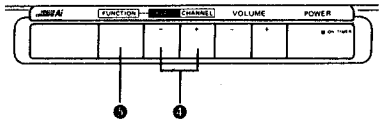


Note: The Remote Control's FUNCTION BACK button ❽ or FORWARD button ❾ selects **only picture and sound adjustment modes: TINT, COLOR, PICTURE, BRIGHT, DETAIL, BASS, TREBLE and BALANCE.** The other control modes can be selected directly with the Remote Control's respective buttons. Pressing FUNCTION FORWARD button ❾ advances the colored portion in the order as shown on the left for "picture/sound adjustment modes", pressing FUNCTION BACK button ❽ advances in the reverse order.

- After selecting the desired mode, press LEVEL/CHANNEL (–/+) buttons ❸ on the front panel or FUNCTION (–/+) buttons ❾ on the Remote Control while the selected mode indication is being displayed to make your preferred adjustment. The Remote Control's FUNCTION (–/+) buttons ❾ control **only picture and sound adjustments.**

Notes:

- When using the front panel buttons, before the FUNCTION button is pressed for the first time with nothing displayed on the screen, the TV is in the "CHANNEL SELECT" mode. Therefore, in this mode, channel selection is possible by pressing LEVEL/CHANNEL (–/+) buttons ❸ on the front panel.
- After completing picture and sound adjustments from the Remote Control, pressing either FUNCTION (–) or (+) button ❺ will return directly to the last chosen adjustment mode.



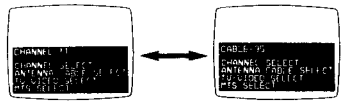
1 CHANNEL SELECT mode

In this mode, press LEVEL/CHANNEL (+) button ❸ on the front panel to scan up the channels, and (–) button to scan down the channels.

(The screen illustrations below show the case when the TV is in the "CHANNEL" mode. When in the "CABLE" mode, the "CABLE" indication appears instead of "CHANNEL").

2 ANTENNA/CABLE SELECT (broadcast) mode

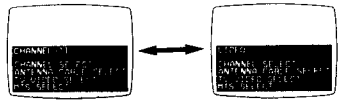
In this mode, press LEVEL/CHANNEL (–/+) buttons ❸ on the front panel to change the broadcast mode between "CHANNEL" (for regular UHF/VHF channels) and "CABLE" (for cable channels).



3 TV/VIDEO SELECT mode

In this mode, press LEVEL/CHANNEL (–/+) buttons ❸ on the front panel to switch the mode between "TV" (for off-air or cable TV broadcasts) and "VIDEO" (for a video source connected to the TV's VIDEO/AUDIO INPUT connectors ⓫ or S-VIDEO IN connector ⓬). See "CONNECTING TO EXTERNAL EQUIPMENT" on page 26.

Note: Mode selection can also be performed with TV/VIDEO button ❾ on the Remote Control.



4 MTS SELECT mode

This TV set incorporates an MTS (Multichannel Television Sound) decoder to receive stereo broadcasts and any accompanying SAP (Second Audio Program), such as a bilingual broadcast.

Available sound will be:

(1) Monaural (MAIN) audio program (regular broadcasts)
(2) STEREO (MAIN) audio program
(3) Second Audio Program (SAP)

In this mode, the "← ON AIR" shows that MTS mode is now being broadcast. Press LEVEL/CHANNEL (–/+) buttons ❸ to change the reception mode among "STEREO", "SAP" and "MONO".

Each time it is pressed, the color of the indication changes from blue to magenta to show that the mode has just been switched.

Notes:

- Mode selection can also be performed with MAIN/SAP button ❿. Each time it is pressed, the mode changes in the order of "STEREO" — "SAP" — "MONO" — "STEREO".
- If the TV set is kept always set to the stereo mode, when a stereo broadcast is received, stereo sound is output automatically.
- If the received stereo signal is weak, noise may be heard. In such a case, press LEVEL/CHANNEL (–/+) buttons ❸ (or MAIN/SAP button ❿) to engage the MONO mode for better sound reception.
- If the received SAP signal is weak, the SAP will not be heard. Select the MONO mode for better sound reception.
- Even if both stereo and SAP broadcasts are received, both broadcasts cannot be heard at a time.

When using the TV set for cable reception

Transmission of Cable TV signals may differ from off-air TV broadcasts. It is possible that the multichannel TV sound (MTS) may not be received satisfactorily.

5 — 6 VNR, NOTCH ON/OFF modes

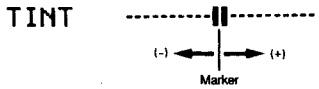
In these modes, press LEVEL/CHANNEL (–/+) buttons ❸ on the front panel to switch on and off the VNR and NOTCH functions. For details of those functions, see "MORE USEFUL FUNCTIONS" on page 22.

7 — 14 Picture/sound adjustment modes

In these modes, an adjustment scale with a marker appears on the screen. Press LEVEL/CHANNEL (–/+) buttons ❸ on the front panel or FUNCTION (–/+) buttons ❾ on the Remote Control to fine adjust each item to your preference according to the chart below. (The center position is only a reference level, rather than a standard setting.)

(–)	Item	(+)
Reddish	TINT	Greenish
Subdued	COLOR	Vivid
Light	PICTURE	Strong
Dark	BRIGHT	Bright
Soft	DETAIL	Sharp
Soft	BASS	Strong
Soft	TREBLE	Strong
Left	BALANCE	Right

Note: When you wish to restore all adjustment modes to their scale's center position, use AV STATUS/RESET button ❿. For details, see "AV STATUS/RESET Button" on page 17.



(No.50577) 7

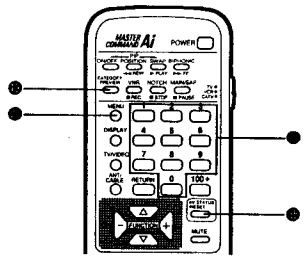
AV-2771S

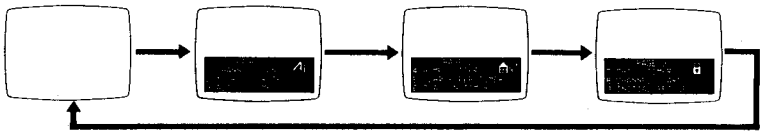
MENU BUTTON

* Set the 3-way mode selector to the "TV" position.

The "MENU" button selects a list of functions that can be programmed for operating the TV more conveniently. This function is possible only on the Remote Control.

- Press MENU button ⑯ on the Remote Control to display the list of programmable convenience functions on the screen. The "MENU" consists of 3 pages. Press the MENU button repeatedly to display the pages in the sequence below.
- Press numbers "1" through "9" on 10-digit keypad ⑱ to select the corresponding function in the numbered "MENU".





PAGE-1

1. CHANNEL SCAN

This feature allows automatic scanning, in ascending order, of the channels which have been stored following the procedures of "9. INITIAL SET-UP" (described on page 15).

1) With "PAGE-1" MENU displayed on the screen, press "1" of 10-digit keypad ⑱.
   - All memorized channels (either "CHANNEL" or "CABLE" mode) will now be scanned sequentially in ascending order beginning with the channel that the TV is tuned to. Scanning will stop automatically when the original channel is reached. "SCAN STOP" appears to show the CHANNEL SCAN mode has finished.

2) Press any button on the Remote Control, if you wish to stop scanning at a certain channel before the original channel is reached.
   To resume scanning, press MENU button ⑯ and then "1" of 10-digit keypad ⑱.

Notes:

- When the TV is in the "CABLE" mode, the "CABLE" indication appears on the screen instead of "CHANNEL".
- For changing memorized channels, see "9. INITIAL SET-UP".
- If you wish to start CHANNEL SCAN at a specific channel, first select the broadcast mode ("CHANNEL"or "CABLE") then that channel number, and then follow instructions on the left.
- While actual CHANNEL SCAN is being performed, all front panel buttons become inoperable.
- In the VIDEO mode, if the CHANNEL SCAN menu is selected, the mode is switched to the TV mode; the CHANNEL SCAN function does not operate in the VIDEO mode.

2. YOUR FAVORITES

This feature displays Real Channels in two categories, "DAYTIME" and "EVENING", by ranking the three most-frequently-viewed channels in each category. Any of the channels displayed on the screen can also be tuned to directly using the 10-digit keypad.

1) With "PAGE-1" MENU displayed on the screen, press "2" of 10-digit keypad ⑱. The three ranked channels appear in sequence every few seconds. At the same time, the "station ID" (or channel number, if the station ID is not stored in memory) of the channel being displayed on the screen blinks.

(Sample of channel ranking)

2) When you see the program you want to view, press "1", "2" or "3", corresponding to the number indicating the channel.

Notes:

- When the clock has not been set or is not operating, "YOUR FAVORITES" cannot be operated.
- "DAYTIME" is from 4:00 a.m. to 5:59 p.m. "EVENING" is from 6:00 p.m. to 3:59 a.m. Only the three most-frequently-viewed channels of the current time span ("DAYTIME" or "EVENING") are displayed on screen.

3. AUTO VOLUME

Normally, you adjust volume at different times of the day. For example, you tend to turn down the volume when watching TV late at night. This feature memorizes all volume adjustments you make for five days after the clock is set. After that, volume is automatically adjusted according to the pattern of adjustments you made at specific times during that five-day period.

1) With "PAGE-1" MENU displayed on the screen, press "3" of 10-digit keypad ⑱. The display will show:

2) Press "1" to set the AUTO VOLUME function to ON. (Press "2" for OFF.)
   - While AUTO VOLUME is ON, the following "AUTO" indication appears on the upper part of the volume level reference scale.

Notes:

- When the clock has not been set or is not operating, the AUTO VOLUME function cannot be operated. Also, for five days after the clock has been set, AUTO VOLUME does not operate, since that amount of time is required for storing the data of volume levels for each period of time in memory. (When power is off, the muting function is operated, the clock is not operating, or audio volume controls are adjusted, the volume level data is not stored in memory.)
- For 30 minutes after an audio volume setting, AUTO VOLUME does not operate.
- Adjustments of volume levels are limited to within ±5 to prevent an abrupt, extreme change in volume level.
- Automatic volume adjustment is performed every hour.

PAGE-2

4. HOME SITTER

The "HOME SITTER" feature enables the TV to be turned on and off automatically at preset times every day.
With "PAGE-2" (or "PAGE-1" or "PAGE-3") MENU displayed on the screen, press "4" of 10-digit keypad ●. The display will show:

- At this time, if the display of "POWER INTERRUPTED / WOULD YOU SET CLOCK FIRST?" appears, it shows that the clock is not operating, and the HOME SITTER will not function.
  Press "1" (YES) to set the clock. (If "2" (NO) is pressed, the message "YOU CANNOT OPERATE HOME SITTER!!" is displayed.)
  Set the clock. See "3) SET CLOCK" of "9. INITIAL SET-UP" on page 16 for details regarding clock setting. After setting the clock, the message "THANK YOU!" appears to show that the clock has just been adjusted and the HOME SITTER is now ready to be set.

1) SET

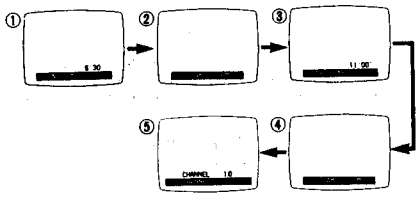
Press "1" to place the HOME SITTER in standby. The ON/OFF time and channel number which have been previously set will be displayed. When the POWER button is pressed to turn the TV off, POWER/ON TIMER indicator ● lights and "YES" appears on the screen to show that the HOME SITTER is in operation.

2) CANCEL

Press "2" to cancel the HOME SITTER. "NO" appears to show that the HOME SITTER has been cancelled.

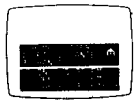
3) CHANGE

Press "3" to re-adjust the HOME SITTER setting. Follow the on-screen displays to set the switch-on time, switch-off time and channel number, using the 10-digit keypad.



① Set the switch-on time.
② Select "AM or "PM".
③ Set the switch-off time.
④ Select "AM" or "PM".
⑤ Set the channel number.

When the channel number is set, the display will show:



- This display shows that the HOME SITTER is set to switch the TV on at 6:30 PM, switch it off at 11:00 PM and the channel to be received is "CABLE 13".

Notes:

- If an invalid time or channel number is selected, it will be rejected and it must be reset properly.
- If you wish to reset the switch-on time only, stop keying in data (waiting until the on-screen display disappears) after keying in the AM/PM setting, or press keys other than the 10-digit keypad. And, if you wish to reset the switch-on and switch-off time only, the procedure is the same.
- The function that automatically turns the TV off for the ON TIMER, if no TV operation is performed after 2 hours, does not operate for the HOME SITTER.
- If the power is disconnected (such as in a power failure, etc.), and reapplied later, the HOME SITTER will be cancelled. When disconnected only for a couple of minutes, the HOME SITTER is reactivated; however, it turns the TV on and off later than the set time by the amount of time of interruption.
- If the channel which has already been set as a "Guarded Channel" is selected, that channel is rejected and cannot be set for the HOME SITTER. (For details of the Guarded Channels, see page 13.)

5. 12HR SLEEP TIMER

The "12HR SLEEP TIMER" feature allows you to turn off your TV automatically at a preset time.

1) With "PAGE-2" (or "PAGE-1" or "PAGE-3") MENU displayed on the screen, press "5" of 10-digit keypad ●.
   The display will show:

- If the built-in clock has not been set to operate properly, the 12HR SLEEP TIMER will not function. In this case, the following display will appear on the screen to show that the clock requires adjustment.

Press "1" (YES) of the 10-digit keypad to adjust the clock. (If "2" (NO) is pressed, the warning message "YOU CANNOT OPERATE SLEEP TIMER!!" is displayed.)
Set the built-in clock. (See "3) SET CLOCK" of "9. INITIAL SET-UP" on page 16 for details.) When the clock is adjusted, the message "THANK YOU !" appears. Then, the following display appears to show that the SLEEP TIMER is now ready to be set.

2) Press the numbers on the 10-digit keypad to set the desired switch-off time. The 12HR SLEEP TIMER can be set for up to 11 hours 59 minutes from the current time.
   For example, if it is now 7:00 PM, and you want the TV to switch off automatically at 9:00 PM, press "9", "0" and "0". (The "AM/PM" setting is done automatically.) The selected time of "9:00 PM" appears.

- When you select "1" for hour setting (for example, "1:05 AM"), remember to press "0" first, then press "1", "0" and "5".

3) To cancel the 12HR SLEEP TIMER setting, key in the current time (the current time setting of the TV's built-in clock).

Notes:

- If an invalid time is selected (for example: "5:87"), it will be rejected and the 12HR SLEEP TIMER must be reset properly.
- While the 12HR SLEEP TIMER is activated, if the POWER button is pressed to turn the power off and on again, the 12HR SLEEP TIMER will be cancelled.
- While the 12HR SLEEP TIMER is activated, if the power is disconnected (such as in the case of power failure, etc.) and reapplied later, the TV is turned off. When disconnected only for a couple of minutes, the 12HR SLEEP TIMER is re-activated; however, it turns the TV off later than the set time by the amount of time of interruption.
- The 12HR SLEEP TIMER may turn off the TV a little earlier than the preset time.
- When the remaining time reaches 1 minute, the following message appears for a few seconds and "GOOD NIGHT" continues to blink. While the display remains on the screen, each pressing of the FUNCTION FORWARD button (▼) on the Remote Control will delay the turn-off time by 15 minutes.

6. DUAL ON TIMER

The "DUAL ON TIMER" feature allows you to turn on your TV automatically at a preset time and on a specific channel. The DUAL ON TIMER is available for 2 different settings.

With "PAGE-2" (or "PAGE-1" or "PAGE-3") MENU displayed on the screen, press "6" of 10-digit keypad ⑥. The display will show:

- At this time, if the display of "POWER INTERRUPTED/ WOULD YOU SET CLOCK FIRST?" (which may appear during the 12HR SLEEP TIMER procedure) appears, it shows that the clock is not operating, and the DUAL ON TIMER will not function.
  Press "1" (YES) to set the clock. (If "2" (NO) is pressed, the warning message "YOU CANNOT OPERATE ON TIMER!!" is displayed.)
  Set the clock. See "3) SET CLOCK" of "9. INITIAL SET-UP" on page 16 for details regarding clock setting. After the clock has been set, the message "THANK YOU!" appears to show that the clock has just been adjusted and the DUAL ON TIME is now ready to be set.

Two different settings are possible. Press "1" or "2" to select the setting position. The display will show:

- The second from the bottom line shows the preset time if already previously set.

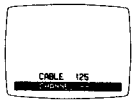
1) SET
Press "1" to start the DUAL ON TIMER for turning the TV on automatically at the preset time shown. "YES" appears to show that the DUAL ON TIMER has started.

2) CANCEL
Press "2" to cancel the setting. "NO" appears to show that the DUAL ON TIMER has been cancelled.

3) CHANGE
Press "3" to re-adjust the setting. Then, the following display appears.

Press the numbers on the 10-digit keypad to set the desired switch-on time. For example, if you want the TV to switch on automatically for CHANNEL 12 at 7:00 AM, press "7", "0" and "0". (When you select "1" for hour setting, remember to press "0" first, then press "1".) The selected time of "7:00" appears and immediately the display changes to:

Then, press "1" to select the "AM" setting. (Press "2" to select the "PM" setting.) Then, the following display appears. Press "1" and "2" for specifying "CHANNEL 12".



Now the following display appears on the screen to show the DUAL ON TIMER is set to "7:00 AM, CHANNEL 12" with the <YES> indicating the DUAL ON TIMER has started. Finally, press POWER button ⑩ to turn the power off. POWER/ON TIMER indicator ⑨ remains lit to show that the DUAL ON TIMER is in operation.

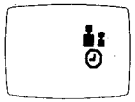
Notes:

- If an invalid time is selected (for example: "17:70"), it will be rejected and the DUAL ON TIMER must be reset properly.
- After the DUAL ON TIMER has been properly set, it functions only once for each setting (up to 2 settings are possible) to turn on the TV's power. (It does not operate repeatedly every day at the same time as a serial time.)
- Once the DUAL ON TIMER turns the TV on automatically, if the TV is not operated in any way, after 2 hours the TV will turn off automatically for safety. A single adjustment, even audio level adjustment or channel selection, will cancel this switch-off function.
- While the DUAL ON TIMER is activated, if the power is disconnected (such as in the case of power failure, etc.) and reapplied later, the DUAL ON TIMER is cancelled. When disconnected only for a couple of minutes, the DUAL ON TIMER is reactivated; however, it turns the TV on later than the set time by the amount of time of interruption.
- If the channel which has already been set as a "Guarded Channel" is selected, that channel is rejected and cannot be set for the DUAL ON TIMER. (For details of the Guarded Channels, refer to page 13.)
- When "2" is pressed, any presettings previously made after "1" was pressed will be cancelled. To keep DUAL ON TIMER functioning, make sure to reset it by pressing "1" after pressing "2".

PAGE-3

7. CHILD TIMER

The "CHILD TIMER" feature enables the TV to be turned off automatically at a preset time every day, and once it has been set, it continues to operate unless it is cancelled. Different from the 12HR SLEEP TIMER, the CHILD TIMER not only turns off the TV, but if the power is reapplied later, only a blue-blank screen appears instead of a normal screen. At this time, an ID number must be entered; when a correct ID number is entered, the blue-blank screen changes to a normal one. Also after an hour has passed, the function is cancelled automatically.
With "PAGE-3" (or "PAGE-1" or "PAGE-2") MENU displayed on the screen, press "7" of 10-digit keypad ⑦. The display will show:



Then, press "0". The display changes to:

1) SET
Press "1" to place the CHILD TIMER in standby. The OFF TIME which has been previously set will be displayed. "YES" appears on the screen to show that the CHILD TIMER is in operation.

2) CANCEL
Press "2" to cancel the CHILD TIMER. "NO" appears to show that the CHILD TIMER has been cancelled.

3) CHANGE
Press "3" to re-adjust the CHILD TIMER setting. Follow the on-screen displays to reset the OFF TIME, using the 10-digit keypad.

Set the OFF TIME.


Select "AM" or "PM".

When the OFF TIME is set, the display will show:

4) SET ID NO.
Press "4" to set the ID number. The display will show:

Press any of 3 numbers you wish to be the ID number. When completed, "ENTERED" appears to show that the ID number you have just keyed in is set.

CHILD TIMER operation

1) When the POWER button is pressed after the CHILD TIMER has already turned the power off, the following display appears.

2) Key in the ID number using the 10-digit keypad. Then the blue-blank screen will change to a normal screen.
3) If the keyed-in ID number is incorrect, the display shows:

And the blue-blank screen will remain.

Notes:

- If you wish to change the ID number, follow the steps of "4) SET ID NO.".
- If the power is disconnected (such as in the case of power failure, etc.), and reapplied later, the ID number is reset to "000".
- If you forget the ID number which you have set, reset it.
- Since the ID number for the CHILD TIMER and CHANNEL GUARD is the same, changing one will also automatically change the other.

8. CHANNEL GUARD

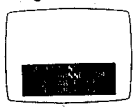
The "CHANNEL GUARD" feature allows you to assign an "ID number" to specific channels of your choice, making them "Guarded Channels". This prevents these specific channels from being selected, unless the "ID number" is keyed in.

First select a channel you wish to set as a Guarded Channel. With "PAGE-3" (or "PAGE-1" or "PAGE-2") MENU displayed on the screen, press "8" of 10-digit keypad ⑧. The display will show:

Then, press "0". The display changes to:

- Channel numbers displayed are Guarded Channels, if already previously set.

1) SET
Press "1". The display changes to:



For example, if the current channel being received is "CHANNEL 25", and you wish to store this channel as Guarded Channel 1, then press "1". The display changes to show that CHANNEL 25 is now set as Guarded Channel 1.

2) CANCEL
Press "2" to cancel the Guarded Channel. The display will show:

With this display on the screen, press the number of the Guarded Channel you wish to cancel from the list. For example, if you wish to cancel CHANNEL 25 (in this case, Guarded Channel 1) from the list, press "1". Then the display changes to show that CHANNEL 25 (Guarded Channel 1) has been cancelled.

3) SET ID NO.
Press "3" to set the ID number. The display will show:

Press any 3 digits you wish to be the ID number. When completed, "ENTERED" appears to show that the ID number you have just keyed in is set.

Viewing Guarded Channels
1) Select the Guarded Channel. (If the Guarded Channel you wish to view is CHANNEL 25, press "2" and "5".) Then, the following display appears:

2) Key in the ID number using the 10-digit keypad. The channel appears.
3) If the keyed-in ID number is incorrect, the display shows:

And the Guarded Channel you have selected cannot be seen.

Notes:
- If you wish to change the ID number, follow the steps of "3) SET ID NO.".
- If the power is disconnected (such as in the case of power failure, etc.), and reapplied later, the ID number is reset to "000".
- When performing the CHANNEL SCAN function, or selecting channels using CHANNEL (–/+) buttons ⓮, the Guarded Channels are skipped.
- In the following cases, the Guarded Channel can be seen without keying in the ID number:
  - When you press RETURN button ⓯ from a channel which has been selected immediately after viewing a Guarded Channel.
  - When you press ANT/CABLE buttons ⓰ from a channel of a different broadcast mode (CHANNEL or CABLE) which has been selected immediately after viewing a Guarded Channel.
  - When you press CHANNEL (–/+) buttons ⓮ on the Remote Control or LEVEL/CHANNEL (–/+) buttons ⓱ on the front panel, while in the MANUAL PROGRAM mode of the INITIAL SET-UP (on MENU PAGE-3), if the selected channel which has already been ADDed happens to also be a Guarded Channel.
  - When you press "4" (CHANNEL UP) or "5" (CHANNEL DOWN) of the 10-digit keypad while in the MANUAL PROGRAM mode of the INITIAL SET-UP, if the Guarded Channel happens to also be the next higher or lower channel following the one to which you are presently tuned.
  - While in the AUTO PROGRAM mode of the INITIAL SET-UP, if the AUTO PROGRAM is interrupted immediately when a Guarded Channel appears.
  - When the channel which has already been set for the DUAL ON TIMER or HOME SITTER is set as a Guarded Channel.
- If you forget the ID number which you have set, reset it.

9. INITIAL SET-UP

The INITIAL SET-UP feature allows you to perform basic settings for the TV status. This consists of Channel Memory (Auto/Manual), Set Clock, Set AV Status, Noise Mute, Message Style, Set Mute Level and Set Category Preview.

Note: When performing Channel Memory (MANUAL PROGRAM), select an appropriate broadcast mode (either "CHANNEL" or "CABLE") before you select the INITIAL SET-UP mode.

- With "PAGE-3" (or "PAGE-1" or "PAGE-2") MENU displayed on the screen, press "9" of 10-digit keypad ⓮. The "INITIAL SET-UP" consists of 3 pages. Press "9" of 10-digit keypad ⓮ or the MENU button repeatedly to display the pages in the sequence below.
- Press numbers "1" through "8" on 10-digit keypad ⓮ to select the corresponding function of the numbered items.

1) AUTO PROGRAM
This function allows memorizing the channels automatically to match the TV broadcasts and cable channels of your area. The memorized channels can be selected by CHANNEL (–/+) buttons ⓮ on the Remote Control or LEVEL/CHANNEL (–/+) buttons ⓱ on the front panel, or in the CHANNEL SCAN mode, while skipping channels where there are no broadcasts.

Press "1" of the 10-digit keypad. The following display will appear and the program set-up procedure begins automatically.

When tuned to a channel in which a TV program is broadcast, the following display appears and this channel is memorized.

When the AUTO PROGRAM procedure (scanning and memorizing) is completed, it will be indicated by the following display.

Notes:
- If the broadcast signals are weak, the channel may not be memorized. In this case, perform the MANUAL PROGRAM procedure.
- The AUTO PROGRAM procedure takes approximately 4 minutes. If you wish to stop this procedure before completion, press any button on the Remote Control.

2) MANUAL PROGRAM
Similar to the AUTO PROGRAM function, this is for memorizing channels, but it is performed manually. The resulting Manual Programming is also effective when performing up/down channel selection or CHANNEL SCAN. Press "2". The display will show:

The current tuned-in channel

Simply follow the on-screen instructions.

Note: First select the broadcast mode before entering this MANUAL MEMORY mode.

1) Press "1" (ADD) to add this channel in memory. A bar "–" will appear between the broadcast mode (CHANNEL or CABLE) and the channel number to show that the channel has been memorized.
2) Press "2" (ERASE) to erase this channel from memory, if you do not wish to preset it in memory or if no TV station is broadcasting on it. The bar between the broadcast mode and channel number will disappear.
3) Press "4" (CHANNEL UP) or "5" (CHANNEL DOWN) to select the next higher or lower channel.
4) Press "3" (END) when you have stored all required channels in memory.
5) When you wish to store channels of the other broadcast mode, select the mode first, then repeat steps 1) through 4).
   - In step 3) above, if selecting channels is difficult, press the CHANNEL (–/+) buttons on the Remote Control.
   - Be sure to perform these operations using the Remote Control.

3) SET CLOCK

This TV has a built-in clock. Set the clock as follows.

1) Press "3" of 10-digit keypad ⑩. The display will show:

2) Then, press the numbers on the 10-digit keypad to set the current time. For example, if the present time is 7:35 PM, press "0", "7", "3" and "5" (or press "7", "3" and "5"). Then, the display changes to:

3) Press "2" to select the "PM" setting. (Press "1" to select the "AM" setting.) Then, the display changes to the following to show the current time is set and the clock starts operating.

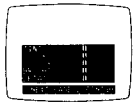
Notes:

- If an invalid time is selected (for example: "17:70"), it will be rejected and the built-in clock must be reset properly.
- If you wish to set the clock precisely, in step 3) above, press "2" (or "1") at the same instant of a time signal.
- The built-in clock may loose time depending on the manner in which the TV is used or the frequency of the power source. If the time difference becomes great, re-adjust the clock.
- If the power is disconnected (such as in the case of a power failure, etc.), and reapplied later, the clock will stop operating. (The clock status can be checked on the screen. Press the DISPLAY button. If the clock has stopped, the message "CLOCK STOPPED" is displayed instead of the current time. See "DISPLAY Button" on page 22 for details.) When disconnected only for a couple of minutes, the clock is reactivated; however, it will be later than the actual time by the amount of time of interruption.

4) SET AV STATUS

This TV set incorporates the AV STATUS memory that can store 2 variations for preset picture/sound adjustments, allowing you to change the picture/sound tone/speaker balance to your preference, depending on each source.

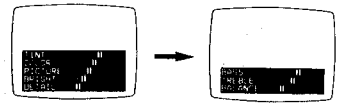
1) Press "4" of 10-digit keypad ⑩. The display will show:



2) Make picture adjustments to your preference. Use the FUNCTION BACK/FORWARD buttons to select the item, and use the FUNCTION (–/+) buttons to adjust each item. If you also wish to make sound adjustments, press "1" to advance the adjustment mode display. The following display will appear. (Press "1" again to return to the picture adjustment display.)

3) Make sound adjustments to your preference. Use the FUNCTION BACK/FORWARD buttons to select the item, and use the FUNCTION (–/+) buttons to adjust each item. When finished, press "2". The following display will appear.

4) Press "1" to store the setting as the "AV STATUS A". (Press "2" to store it as the "AV STATUS B".) Then the picture and sound adjustment settings (items and their reference scales) appear for a few seconds each.



5) Repeat steps 1) through 4) for making another AV STATUS setting.

Note: When you wish to choose the preset AV STATUS, just press AV STATUS/RESET button ⑫ to choose either set of AV STATUS adjustments. For details, see "AV STATUS/RESET Button" on next page.

AV STATUS/RESET button

Use this button for choosing the preset AV STATUS or for resetting the picture/sound adjustment items.
Press AV STATUS/RESET button ⑫ on the Remote Control.
The following display appears.

- Another pressing of the AV STATUS/RESET button resets all previously adjusted items to their center positions.

1. AV STATUS A

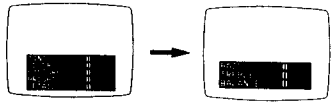
Press "1" of 10-digit keypad ⑩ for selecting AV STATUS A. The picture and sound change as preset for "AV STATUS A".
Then the picture and sound adjustment settings (items and their reference scales) appear for a few seconds each.

2. AV STATUS B

Press "2" for selecting AV STATUS B. The picture and sound change as preset for "AV STATUS B". Then the picture and sound adjustment settings (items and their reference scales) appear for a few seconds each.

3. RESET

Press "3" when you wish to reset all adjusted items (TINT, COLOR, PICTURE, BRIGHT, DETAIL, BASS, TREBLE and BALANCE) back to their center positions at the same time. The on-screen displays appear and change as follows:



Note: While in this mode, the setting of the AV STATUS cannot be cancelled.

5) NOISE MUTE

The NOISE MUTE feature allows replacing the "snowy" screen of vacant non-broadcast channels with a blue-blank screen; and, at the same time, muting the noisy sound.
Press "5". The display will show:

At this time, either current setting ("ON" or "OFF") is indicated at the right of "PLEASE SELECT".

Press "1" to select the Noise Mute mode for a blue-blank screen with no sound.
Press "2" to release the mode. Screen is normal (without blue-blank screen) and sound can be heard.

Note: The Noise Mute mode can be activated only when either no signal is being input or when a weak signal is being received.

- If you wish to view a TV program having a weak broadcast signal, release the Noise Mute mode to prevent it from being activated.
- If you use an antenna system, before adjusting it (extending, rotating, etc.), release the Noise Mute mode to prevent it from being activated when the signal condition changes.
- When playing back VCR recordings or the like, picture and sound muting conditions might continue to occur for a few seconds after engaging the Play mode. Release the Noise Mute mode when necessary.
- When the Noise Mute mode is engaged, it is also applied to the output signals, both from LINE OUT connectors and from AUDIO OUT (VARIABLE) connectors. Release the Noise Mute mode to prevent it from having effect when connecting external components to the TV.

6) MESSAGE STYLE

This function is for switching the black background of the on-screen display on and off (except for channel numbers and clock time). Press "6". The display will show:

Press "1" to select the on-screen display mode with a black background.

Press "2" to select the on-screen display mode without a black background.

7) SET MUTE LEVEL

This feature allows presetting the sound level of the mute function. Press "7" of 10-digit keypad ●. The display will show:

Press the VOLUME (–/+) buttons to preset a mute level.
Then press "1" to complete the setting.

Note:

- If the preset mute level is greater than the current volume level, pressing the MUTE button makes the volume level "0".

8) SET CATEGORY PREVIEW

This function enables storing up to five frequently-viewed channels for five different categories (Network, Movies, Sports, News and Choice) under "Category Preview", allowing immediate, direct access to the channel of your choice by using CATEGORY PREVIEW button ●.

1) While in the channel select mode (either "CHANNEL" or "CABLE" mode), determine the category and channel you wish to preset under "Category Preview".
2) Press "8" of 10-digit keypad ●. The display will show:

3) Press a number (1 - 5) on 10-digit keypad ● for a category in which you wish to preset a channel. Then, the following display will appear.
(For example, press "1" to select "Network".)

4) Press a number (1 - 5) of 10-digit keypad ● for a position in which you wish to preset a channel. Then, the following display will appear.
(For example, press "3" to select position 3.)

5) Enter a channel you wish to preset (either in the CHANNEL or in the CABLE modes).
(For example, press "0" and "8" to preset "CHANNEL 08".)

6) Press either FUNCTION FORWARD/BACK (▼/▲) button for selecting each of the call letters to be stored. Available characters include the alphanumeric characters (26 English-language letters and 10 numerals), plus various punctuation marks (period, comma, etc.). Then, move the cursor to the next letter position by pressing either FUNCTION (–/+) button on the Remote Control. When the selection of as many as 4 call letters is finished, press "1".
(For example, if you choose the letters "JVC", keep the FUNCTION FORWARD (▼) or BACK (▲) button pressed until the letter "J" appears. Then, press the FUNCTION (+) button to move the cursor one letter position to the right. Press the FUNCTION FORWARD or BACK button to select the letter "V", then move the cursor to the right again with FUNCTION (+). In the same way, select "C", then press "1" to confirm.) The "Category Preview" is displayed for a few seconds.

7) Press "1" to go to the next position within the category. Repeat steps 3) through 6). Press "2" to go to the next category.

Note: Channels the station call-letters of which were stored in the Child Timer or Channel Guard menu memory, cannot be stored in the Category Preview menu memory.

CATEGORY PREVIEW button

- Press CATEGORY PREVIEW button ● anytime you wish to call up a category list of those channels which have been preset with the SET CATEGORY PREVIEW menu for convenient direct channel selection.

1) Press CATEGORY PREVIEW button ● to call up the following display.

2) While the display is on the screen, press the corresponding number of 10-digit keypad ● to select a category.
(For example, press "1" to select "NETWORK".)
The stored channels appear in sequence every few seconds. At the same time, the "station ID" (or channel number, if the station ID is not stored in memory) of the channel being displayed on the screen blinks.

3) While the list is on the screen, press the corresponding number of 10-digit keypad ● for the channel of your choice.
(For example, press "3" to select "CHANNEL-08 <JVC>".)
4) "CHANNEL 08 <JVC>" is tuned to.

Note: As shown above, previously keyed in station call-letters appear with their channel numbers. If different sets of call letters are assigned the same channel number in different categories (or in the same category), the call letters keyed in the lower numbered category (or lower numbered position) will appear on-screen when that channel is selected.

MASTER COMMAND Ai SELF-DEMONSTRATION

FEATURE

Your TV has a self-demonstration feature for the incorporated MASTER COMMAND Ai system, demonstrating automatically all major functions of the MASTER COMMAND Ai.

With PAGE-1 (or PAGE-2 or PAGE-3) MENU displayed, press "0" twice of the 10-digit keypad ("0-0"), or press the FUNCTION and VOLUME (–) buttons on the front panel simultaneously. The demonstration automatically begins in the following order. If you wish to stop the demonstration anytime while it is running, press any key on the Remote Control or on the front panel.

Demonstration procedure

Picture adjustment ←
↓
BIPHONIC
↓
SET CLOCK*
↓
MESSAGE STYLE
↓
HOME SITTER
↓
DUAL ON TIMER
↓
CHILD TIMER
↓
CHANNEL GUARD
↓
SET CATEGORY PREVIEW
↓
CATEGORY PREVIEW
↓
PIP ON/OFF
↓
PIP SWAP
↓
PIP POSITION
↓ (back to Picture adjustment)

*The SET CLOCK mode can operate only when the built-in clock is stopped.

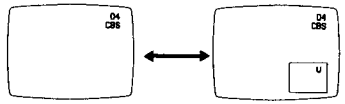
Note: Operating this function adjusts the clock, timer settings, and all other functions to specific demonstration settings. Therefore, re-adjustment of these settings is required once the demonstration has been executed.

PICTURE-IN-PICTURE

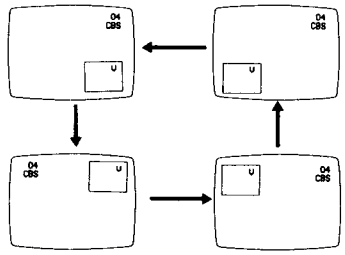
* Set the 3-way mode selector to the "TV" position.

After pressing the PIP ON/OFF button on the Remote Control, a sub (inset) picture, approximately 1/9 normal size, appears in the main picture. When a TV broadcast program is displayed as the main picture, the picture of an external video source from a connected VCR appears as the inset picture; when the main picture is from a VCR, the inset picture is of a TV broadcast.

1) Press the PIP ON/OFF button to display a sub (inset) picture. Each pressing of the button changes the picture as follows:

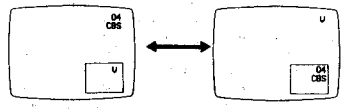


2) Press the PIP POSITION button to change the location of the sub picture. Each pressing of the button changes the location as follows:



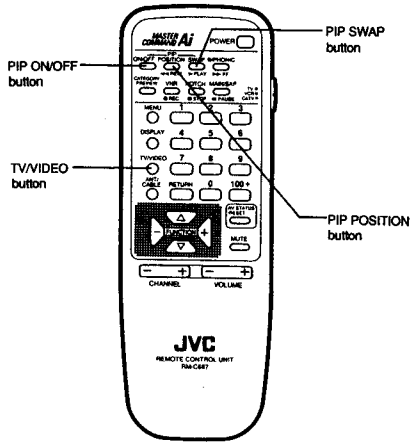
* Pressing either the PIP ON/OFF or PIP SWAP button will not change the location of the sub picture.

3) Press the PIP SWAP button to switch the main picture with the sub picture.
Each pressing of the button changes the picture as follows:



Pressing the TV/VIDEO button also switches the main picture with the sub picture.

* Pressing either the PIP ON/OFF or PIP POSITION button will not switch the main picture with the sub picture.



Notes:

- In the PIP mode, tuning operation can be performed only for the TV-mode picture, whether it is a main or sub picture.
- Only sound from the main picture can be heard.
- When there is no signal received for the main picture or if the signal is inferior, the sub picture might also be distorted or it might not appear within the main picture.
- When the PIP mode is activated or when any channel selection is made while in the PIP mode, a channel number or input mode indication will appear on the screen.
- If the main picture signal is black and white; the sub picture also will be black and white.
- When no video signals are input to the VIDEO INPUT connector and the sub picture is called up, both the main and sub pictures will be the same TV broadcast. Also, when the PIP mode is disengaged while no video signals are input for the main picture, the main picture will be in the VIDEO mode and no picture will appear on the screen.

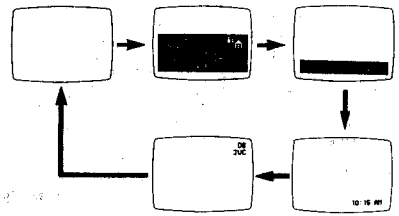
MORE USEFUL FUNCTIONS

* Set the 3-way mode selector to the "TV" position.

DISPLAY button

Press DISPLAY button ⓫ on the Remote Control. The channel number of the program you are now viewing, the current settings of time for SLEEP TIMER/DUAL ON TIMER/HOME SITTER (with symbol)/CHILD TIMER (with symbol), VNR/NOTCH settings, the current time and the channel number with its call letters are displayed in the order as shown below by each pressing of the DISPLAY button. The current time remains displayed on the screen until the DISPLAY button is pressed again.

Note: If the SLEEP TIMER and/or ON TIMER is cancelled, their settings will not be displayed.



VNR button

The "VNR", or "Video Noise Reduction" feature eliminates on-screen picture noise, making pictures appear clearer. Press VNR button ⓬ on the Remote Control. The following display will appear on the screen. Press again to turn the VNR mode off. The display changes to "OFF" and the picture is restored to normal.

- Normally, set this function to "OFF".

NOTCH button

The "Notch" feature substantially reduces horizontal noise, or "dot interference" appearing on the screen especially between two prominent colors bordering each other. Press NOTCH button ⓭ on the Remote Control. The following display will appear on the screen. Press again to turn the Notch mode off. The display changes to "OFF" and the picture is restored to normal.

BIPHONIC button

The "Biphonic" system is a unique sound enhancing system. By varying the phase and frequency characteristics of the sound, it makes the sound seem "wider", even with monaural sources. Press BIPHONIC button ⓮ on the Remote Control. The following display will appear on the screen. Press again to turn the Biphonic mode off. The display changes to "OFF" and the sound is restored to normal.

Note: This system has no effect on externally connected monaural sources, such as a VCR, etc.

MUTE button

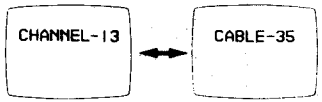
Press MUTE button ⓯ on the Remote Control.
The sound of the TV program being viewed will be reduced to a mute level which has been preset, and the corresponding "VOLUME" indication will appear on the screen.
Press again to restore the sound. Also, a mute level setting is possible. See "7) SET MUTE LEVEL" of "9. INITIAL SET-UP" on page 18.

Note: Changing the audio volume or channel number also restores the sound.

On-screen indication when presetting mute level to "VOLUME 0"

RETURN button

Press RETURN button ⓰ on the Remote Control.
The previously viewed channel will appear on the screen.
Press RETURN again to switch back to the original channel.
Repeatedly pressing RETURN switches between these two channels.



Note: In the VIDEO mode, if the RETURN button is pressed, the mode is switched to the TV mode.

3-WAY MODE SELECTOR

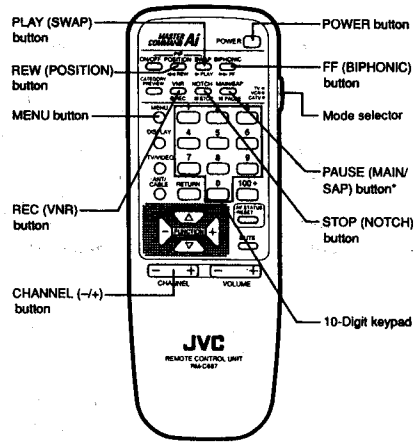
This Remote Control unit has a 3-way mode selector for operating TV, VCR or CATV. When set to the TV mode, the Remote Control can be used to operate a TV. When set to the VCR or CATV mode, it can be used to operate a JVC VCR or certain CATV converters. In addition, it can be used to operate a VCR or CATV converter from another manufacturer when programmed with the corresponding manufacturer code.

■ VCR mode

Set the mode selector to the "VCR" position; the Remote Control is engaged in the VCR mode and a JVC VCR can be operated with the buttons (except the MENU button) as shown on the right.
This Remote Control has been designed to operate a JVC VCR; if your VCR is of a manufacturer other than JVC, program a manufacturer code as follows:

1. Determine the manufacturer code corresponding to the manufacturer of your VCR by checking the table on page 25.
2. Set the mode selector to the "VCR" position.
3. While keeping the MENU button pressed, enter the number of the manufacturer code with the 10-digit keypad. (Be sure to enter a 2-digit number.)

- Upon completion of programming, check operation of the VCR.



JVC VCR Controls

CHANNEL (–/+) Press to change channels of the connected VCR's built-in tuner. (With some models, this function is not available.)
PAUSE Press to engage Pause mode during tape running.
STOP Press to stop tape running.
REC Press simultaneously with PLAY button to start recording.
REW Press in Stop mode to review the tape. Press in Play mode to view speeded-up picture (Shuttle Search).
PLAY Press to play back the tape. Also press simultaneously with REC button to start recording.
FF Press in Stop mode to fast-forward the tape. Press in Play mode to view speeded-up picture (Shuttle Search).
POWER Press to turn VCR's power on and off. (With some models, this function is not available.)
10-Digit keypad Press to select a desired channel directly.

■ CATV mode

Set the mode selector to the "CATV" position; the Remote Control is engaged in the CATV mode and an OAK CATV converter can be operated with the buttons (except the MENU button) as shown on the right.
The Remote Control unit has been designed to operate an OAK CATV converter; if your CATV converter is of a manufacturer other than OAK, program a manufacturer code as follows:

1. Determine the code of the manufacturer of your CATV converter by checking the table on page 25.
2. Set the mode selector to "CATV".
3. While keeping the MENU button pressed, enter the number of the manufacturer code with the 10-digit keypad. (Be sure to enter a 2-digit number.)

- Upon completion of programming, check operation of the CATV converter.

CATV Converter Controls

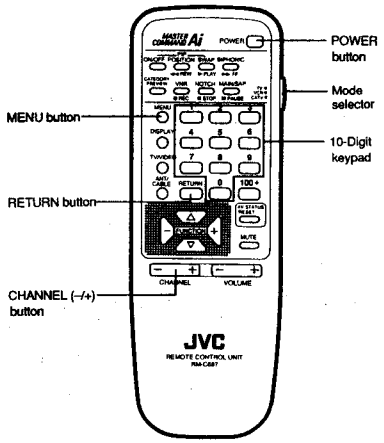
POWER Press to turn the power of the CATV converter on or off.

MENU Press to call up a menu of the CATV converter. (With some converters, this function is not available.)

10-Digit keypad Press to directly select channels which can be received with the CATV converter. Also, press to designate a number when a menu is called up. (With some converters, this function is not available.)

CHANNEL (–/+) Press to tune to lower or higher channels of the CATV converter.

RETURN When a ZENITH CATV converter is used, this operates as the ENTER key.



■ Notes

- If another code is programmed, the previous programmed code is automatically cleared.
- When two or more codes of a manufacturer appear in the list, try programming each of them until your VCR or CATV converter can be operated with the Remote Control.
- This Remote Control is designed to operate only certain functions of a particular VCR or CATV converter; for functions that remain inoperable with this Remote Control, use the Remote Control unit provided with the VCR or CATV converter. For details of operation, read the instruction manual of the component.
- When the batteries are replaced with new ones, all of the manufacturer codes that have been preprogrammed are cleared and the Remote Control functions are restored to their original conditions (VCR = JVC, CATV = OAK).
- For some manufacturer codes, operating distance of the Remote Control unit might be less than that of the original remote control unit.
- Only limited types of VCRs or CATV converters can be operated via this Remote Control: some of the recent or the older models might not be operable with this Remote Control.

- **Operable JVC VCRs**

HR-D130U	HR-D370U	HR-S200U
HR-D140U	HR-D470U	HR-S101U
HR-D142U	HR-D565U	
HR-D150U	HR-D566U	
HR-D170U	HR-D725U	
HR-D180U	HR-D756U	
HR-D250U	HR-S7000U	

* In addition to the above, more recent JVC VCR models are also operable via this Remote Control.

■ Manufacturer code number list

When programming a code number, enter the 2-digit number.

VCR CODE TABLE

Manufacturer	Code No.	Manufacturer	Code No.
AKAI	24 26 27	PHILIPS	08 09 39
BROKSONIC	32	PIONEER	22
CANON	08	QUASAR	08
CITIZEN	18	RCA	09 22 35 38
CURTIS-MATHES	08 35	REALISTIC	08 17 20 33
EMERSON	05 15 16 30 31 32 34	SAMSUNG	25 38
FISHER	19 20 21	SANYO	17 20
FUNAI	33	SCOTT	03 05 11 30
GENERAL ELECTRIC	08 35 38	SEARS	17 18 19 21 22
GOLDSTAR	09	SHARP	36 37
HITACHI	22	SHINTOM	29
JVC	01 02	SONY BETA	10 12
J.C.PENNEY	08 22 23	SONY SUPER VHS	11 12 13
KENWOOD	02	SYLVANIA	08 09 39 41
MAGNAVOX	08 39	SYMPHONIC	33
MARTA	18	TASHIKO	18
MARANTZ	23	TEAC	33
MITSUBISHI/MGA	03 04 05 06 07	TEKNIKA	28
MONTGOMERY WARD	36	TOSHIBA	14 22
NEC	01 02 17 23	VECTOR RESEARCH	23
PANASONIC	08	WARDS	36 37
PENTAX	22	ZENITH BETA	10
PHILCO	08 39	ZENITH VHS	40

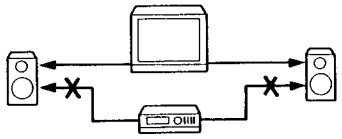
CATV CONVERTER BOX CODE TABLE

Manufacturer	Code No.	Manufacturer	Code No.
GEMINI	14 27	PIONEER	23 29
G.I.	14 15	REGENCY	08
HAMLIN	03 04 24	SCIENTIFIC ATLANTA	12 36 41
JERROLD	05 06 07 16 17	TEXSCAN	26
MACON	30	TOCOM	02 25
MAGNAVOX	09	UNIKA	22
OAK	01 28 35	VID TECH	36
PANASONIC	11 13	VIEWSTAR	20 21
PARAGON	10	ZENITH	10
PHILIPS	19 20 21 32 33		

CONNECTING TO EXTERNAL EQUIPMENT

- **Prior to making any connections to your TV set, be sure to turn the POWER off.**
- **For a more detailed understanding of each connection, it is recommended that you read the instruction manual for each connected component.**
- **If you use video or audio equipment placed too near the Monitor/Receiver, picture and/or sound may become distorted due to interference between these components. In such a case, separate each piece of equipment at a sufficient distance.**
- **The following shows examples for connecting external equipment.**

- **Do not connect another audio source to the same speaker to which the TV set is connected, otherwise damage may result to the amplifier of the TV set or to that of the other audio source.**

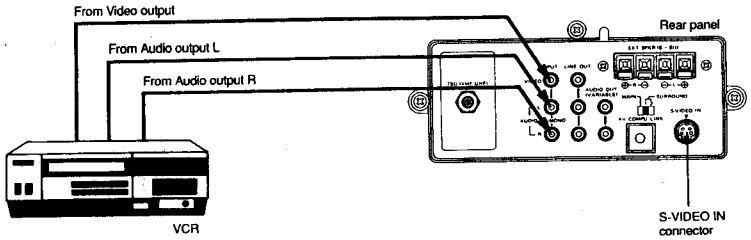


1 VIDEO/AUDIO INPUT connectors

- To view a connected video source, press TV/VIDEO button ⑰ on the Remote Control to engage the VIDEO mode. (Set the 3-way mode selector at the upper right of the Remote Control to the "TV" position.)

Notes:

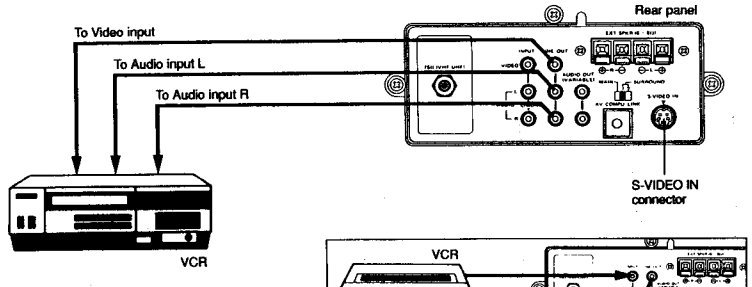
- If the connected video equipment outputs monaural audio, connect to the AUDIO L/MONO (left channel) connector. Sound will be output from both right and left speakers.
- When S-VIDEO IN connector ⑱ is used, the VIDEO connector function of INPUT becomes inoperable.

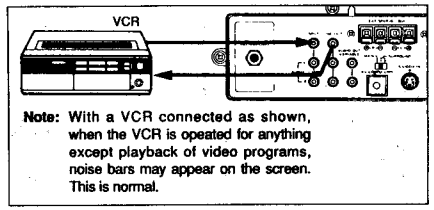


2 LINE OUT connectors

- The video and audio signals available at these connectors are the same as the source presently being monitored on the TV.
  This is convenient for VCR connection.

Note: Video signals that are input to the S-VIDEO IN connector cannot be output from VIDEO connector of LINE OUT connectors.



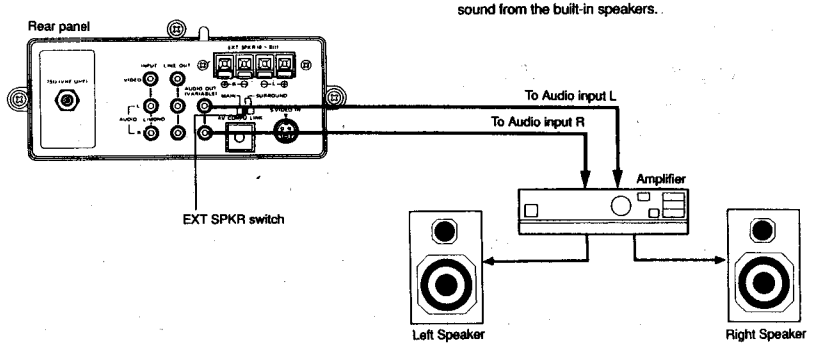


Note: With a VCR connected as shown, when the VCR is opeated for anything except playback of video programs, noise bars may appear on the screen. This is normal.

3 AUDIO OUT (VARIABLE) connectors

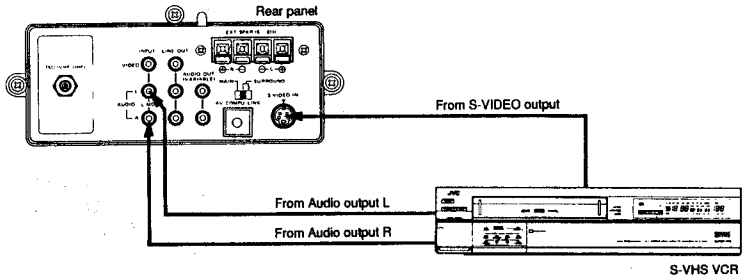
- The audio signals available at these connectors are the same as the audio source of the program being monitored on the TV screen.

- Connect a stereo amplifier to these connectors to listen to the sound through external speakers connected to the amp. The audio output level can be adjusted via VOLUME (–/+) buttons ⑯ on either Remote Control or front panel.
- If the sound which is output from the TV's built-in speaker is noisy, set EXT SPKR switch ⑱ to "MAIN" to turn off the sound from the built-in speakers.



4 S-VIDEO IN connector

- S-VIDEO IN connector is for the separated Y (luminance) and C (chrominance) video signals conforming to the NTSC system, ideal for connection of an S-VHS (Super VHS) VCR.
- Connect the audio output cable to AUDIO INPUT connectors.



- Press TV/VIDEO button ⑱ on the Remote Control to engage the VIDEO mode to view pictures from the S-VHS VCR. (Set the 3-way mode selector at the upper right of the Remote Control to the "TV" position.)

Note: When equipment is connected to this connector, the VIDEO INPUT connector function becomes inoperable.

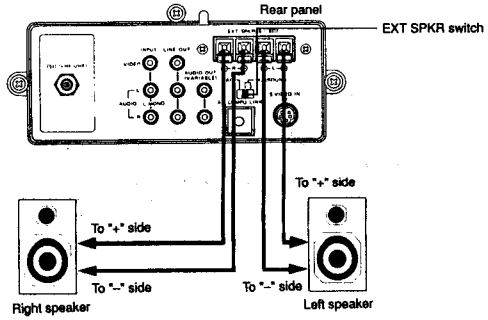
5 Using external speakers

- Connect speaker cables while making sure that the wiring of speaker's polarities is correct.
- Set EXT SPKR switch ⑯ to "MAIN". The sound from the TV's built-in speakers is turned off, and the sound will be heard only from the speakers which are connected to EXT SPKR terminals ⑰.

<Setting the EXT SPKR switch>

The output sound differs depending on the switch setting.

Switch setting	Sound output	
	Built-in speakers	Speakers connected to the EXT SPKR terminals
MAIN	No sound	Normal sound
SURROUND 1	No sound	Surround effect sound
SURROUND 2	Normal sound	Surround effect sound



Notes:

- Use speakers of 6- to 8-ohm impedance.
- If the "+" and "–" terminals are short-circuited, it may cause damage to the TV set.
- It is recommended to use magnetically shielded speakers. If you use speakers other than these, place them at a sufficient distance from the TV set, otherwise the magnetic field generated from such speakers cause unstable picture color.
- Do not connect another audio source to the same speaker to which the TV set is connected, otherwise damage may result to the amplifier of the TV set or to that of the other audio source.

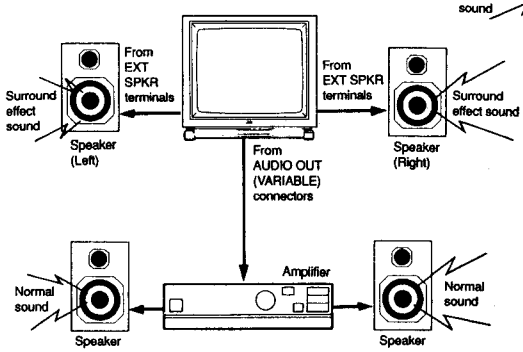
6 Listening to surround sound

"Surround sound" is a sound reproduction process resulting in a three-dimensional aural experience that is a combination of "surround effect sound" and "normal sound", delivered from both of left and right channels at the same time.

- The surround sound effect is possible only when the sound source being listened to is a stereo source. (The surround sound effect is not possible with a monaural sound source.)
- Set the marker of the scale of the BALANCE adjustment mode to its center position using the FUNCTION buttons and/or the AV STATUS/RESET button. See page 17.

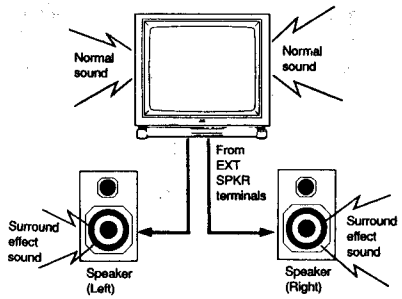
(A) When using an external stereo component system

(1) Connect speakers to the EXT SPKR terminals.
(2) Set EXT SPKR switch ⑯ to "SURROUND 1".



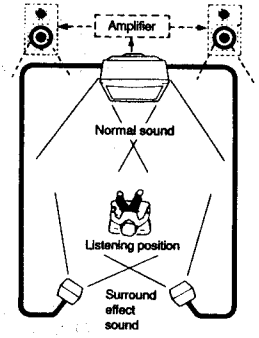
(B) When connecting speakers to the EXT SPKR terminals

(1) Connect speakers to the EXT SPKR terminals.
(2) Set EXT SPKR switch ⑯ to "SURROUND 2".



<Speaker positioning>

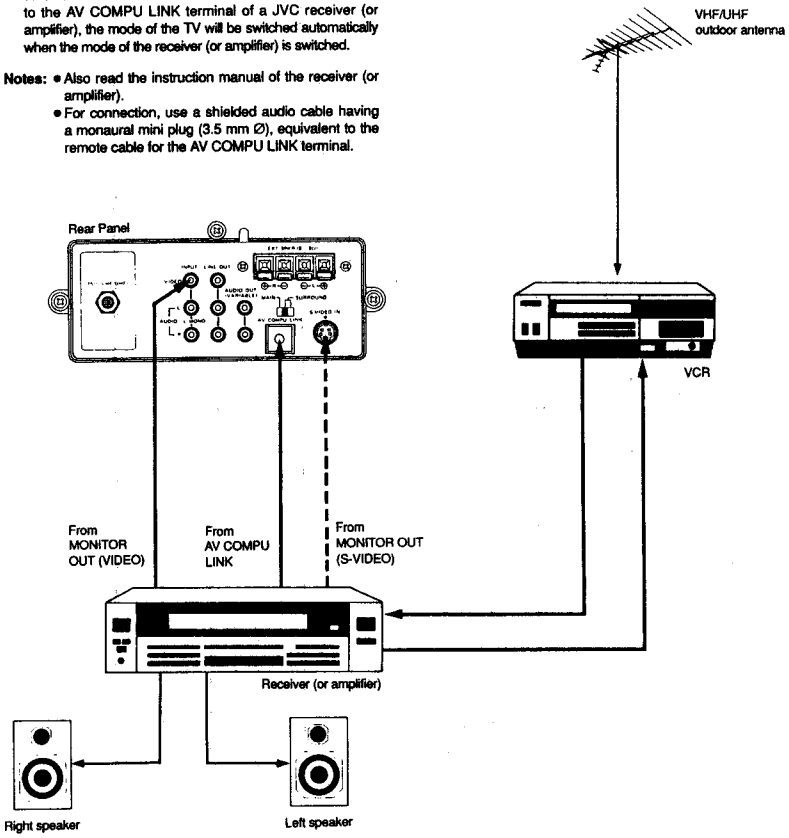
As shown below, position the speakers so that the normal sound can be heard in front and the surround effect sound can be heard in back of the listening position.



7 AV COMPU LINK terminal

- When the AV COMPU LINK terminal of this TV is connected to the AV COMPU LINK terminal of a JVC receiver (or amplifier), the mode of the TV will be switched automatically when the mode of the receiver (or amplifier) is switched.

Notes: • Also read the instruction manual of the receiver (or amplifier).
• For connection, use a shielded audio cable having a monaural mini plug (3.5 mm Ø), equivalent to the remote cable for the AV COMPU LINK terminal.



BEFORE YOU CALL FOR SERVICE

Be sure to review all the instructions written in this booklet. Then try to check according to the following chart.

TRY THIS / PROBLEMS	Is the power cord plugged in ?	Check the AC outlet.	Check antenna (connections and wires).	Try another channel.	If OK, station broadcast problem.	Move antenna in different direction.	Is it a black-and-white program ?	Adjust COLOR control.	Adjust TINT control.	Replace batteries of remote control unit.	
Picture rolls vertically.			NO		NO		NO				THEN, CALL FOR SERVICE PERSONNEL. Be sure to disconnect the power plug, and never try to service the TV yourself. Important: An outdoor antenna system of good quality and condition is recommended to eliminate many service problems.
Noise bars on screen.			NO		NO		NO				
Picture blurred.			NO		NO		NO				
Lines or streaks in picture.			NO		NO		NO				
Weak picture.			NO		NO		NO				
Wrong colors.								NO	NO		
No color.			NO	NO		NO	NO	NO			
Sound OK but picture poor.			NO		NO		NO				
Picture OK but sound poor.			NO		NO		NO				
Neither picture nor sound.	NO										
Sound OK but no picture.					NO						
Weak or inoperable remote control.	First, press the POWER button on the front panel to switch the TV on and off, then check whether the Remote Control is working or not.									NO	NO

SPECIFICATIONS

Type	:	Color monitor/receiver
Reception system	:	NTSC system, BTSC system (Multichannel sound)
Channel coverage	:	VHF 2 – 13, UHF 14 – 69; Sub-Mid, Mid, Super, Hyper and Ultra bands (180-channel frequency synthesizer system)
Power requirement	:	AC 120 V, 60 Hz
Power consumption	:	Max. 147 W, Avg. 103 W
Screen size	:	27" diagonally measured, Full Square
Audio output	:	3 W + 3 W
Speakers	:	3-3/16" × 4-3/4" oval × 2
Antenna input terminal	:	75-ohm (VHF/UHF) terminal (F-type connector)
External input terminals	:	Video/ 1 Vp-p, 75 ohms Audio/ 500 mV rms (–4 dBs), high impedance
Line output terminals	:	Video/ 1 Vp-p, 75 ohms Audio/ 500 mV rms (–4 dBs), low impedance (400 Hz when modulated 100%)
S-VIDEO IN terminal	:	Y/ 1 Vp-p positive (negative sync provided), 75 ohms C/ 0.286 Vp-p (burst signal), 75 ohms
Variable audio output terminals	:	More than 0 – 1550 mV rms (+6 dBs), low impedance (400 Hz when modulated 100%)
External speaker terminals	:	Impedance 6 to 8 ohms
External dimensions (W × H × D)	:	25-3/4" × 22-3/4" × 20-1/2"
Weight	:	84.9 lbs
Accessories	:	Remote Control unit (RM-C687) AA-size dry cell battery × 2

Design and specifications subject to change without notice.

(No.50577) 19

AV-2771S

TECHNICAL INFORMATION

■ CIRCUIT ANALYSIS

●MICRO PROCESSING CONTROL CIRCUIT [in MAIN PCB Ass'y]

- The microprocessor circuit of this model is composed mainly of a 64-pins control CPU (MN1872013JXR#) and non-volatile memory (MN12C261D).
  The circuit functions are essentially the same as the AV-2780S and AV-3150S, except for slight differences in PIP and sound systems.

①CPU (Micro computer)

Pin No.	IN / OUT	Port name	Function	Pin No.	IN / OUT	Port name	Function
4	IN	ADIN0	AFT (S curve) control	34	IN	P42	Key scanning
5	IN	ADIN1	VSM service sw (service mode = GND)	35	IN	P41	Key scanning
6	IN	ADIN2	PLL lock detection (for tuner)	36	IN	P40	Key scanning (memory out)
7	OUT	P50	System constant A (DATA)	37	IN	ACIN	60Hz AC input (for timer setting)
8	OUT	P51	System constant B (CLOCK)	38	IN	SD	Sync. detection (H. sync signal)
9	OUT	P52	System constant C	39	OUT	VOB	On-screen display (background)
10	OUT	P53	System constant D	40	OUT	VOW3	On-screen display (B) (blue back : H)
11	OUT	P54	CLOCK (Tuner serial control)	41	OUT	VOW2	On-screen display (G)
12	OUT	P55	DATA (Tuner serial control)	42	OUT	VOW1	On-screen display (R)
13	OUT	P56	ENABLE (Tuner serial control)	43	OUT	TCI0	Audio muting (muting : H)
14	OUT	P57	Key scanning	45	OUT	P66	AGC muting
17	OUT	DAC0	VOLUME control	46	OUT	P65	Cable TV A/B switching <non using>
18	OUT	DAC1	TINT control	47	OUT	P64	Power on/off switching
19	OUT	DAC2	COLOR control	48	OUT	P63	Sub picture FREEZE on/off (off : H)
20	OUT	DAC3	PICTURE control	49	OUT	P62	Memory C3 (MODE)
21	OUT	DAC4	BRIGHT control	50	OUT	P61	Memory C2
22	OUT	DAC5	DETAIL control	51	OUT	P60	Memory C1
23	OUT	DAC6	BASS control	52	IN	RST	Reset
24	OUT	DAC7	TREBLE control	53	IN	IRQ1	Remote control signal (negative)
25	OUT	DAC8	BALANCE control	54	IN	H SYNC	H. sync. signal (for character generator)
26	OUT	DAC9	Composite / S-VIDEO switch (comp.: H)	55	IN	V SYNC	V. sync. signal (for character generator)
29	OUT	P47	TV / VIDEO switch <non using>	56	IN	IRQ0	Power stoppage detection
30	OUT	P46	TV / VIDEO switch (VIDEO : H)	57	OUT	SBD1	PIP on/off (off : H)
31	OUT	P45	MTS mode switching (monoral/stereo)	58	IN	SBT1	Compulink detection (detecting : L)
32	OUT	P44	MTS mode switching (MAIN/SAP)	59	OUT	SBD0	PIP position control
33	IN	P43	Key scanning	60	OUT	SBT0	PIP position control

※Switching pin truth table (voltages)

TV / VIDEO input switching

Mode \ Pin No.	29 (P47)	30 (P46)
TV	0V	0V
VIDEO 1	5V	0V
VIDEO 2	0V	5V
VIDEO 3	5V	5V

• pin-29 : non using

MTS mode switching

Mode \ Pin No.	31 (P45)	32 (P44)
STEREO	0V	0V
SAP	0V	5V
MONO	5V	0V

PIP position control

Mode \ Pin No.	59 (SBD0)	60 (SBT0)
Lower right	5V	5V
Upper right	5V	0V
Upper left	0V	0V
Lower left	0V	5V

②MEMORY

Pin No.	IN / OUT	Port name	Function	Pin No.	IN / OUT	Port name	Function
1	IN	C3	Memory data (MODE)	13	IN	D01	Notch on/off (on : H)
3	OUT	OUT	Memory data (4-bits parallel)	14	IN	D00	VNR on/off (on : H)
4	OUT	D03	HYPER-BASS on/off (on : H)	15	IN	C1	Memory data (DATA)
5	OUT	D04	BIPHONIC on/off (on = H) <non using>	16	IN	C2	Memory data (CLOCK)
12	OUT	D02	On timer on/off (on : H)				

●IF · VIDEO · CHROMA · DEFLECTION PROCESSING CIRCUIT [in MAIN PCB Ass'y = IC201 : VC2024Z]

• A single chip IC and peripheral circuits perform video, chroma and deflection(except output stage) signal processing. The main IC functions are indicated below.

① **Video (luminance) system**
- Black level compensation
- Delay line (for luminance only)
- 3.58MHz trap (notch)
- Contour compensation (delay line aperture control)
- DC restoration
- Pedestal clamp
- Adjustments (DETAIL, PICTURE, BRIGHT)

② **Chroma system**
- 3.58MHz Band pass amplifire (BPA)
- Built-in filter response adjustment (swicthing)
- ACC
- Color killer
- Color synchronizer (PLL detection)
- Color demodulaton (R-Y, G-Y, B-Y)
- Adjustments (COLOR, TINT)

③ **Sync. and deflection system**
- Synchronization separator (horizontal / vertical)
- Horizontal and vertical oscillators (countdown system, non-adjustment)
- Horizontal pre-drive
- Horizontal AFC

④ **Other**
- On-screen switch & drive
- Horizontal / vertical blanking

●DIGITAL VIDEO PROCESSING CIRCUIT

[PIP(PICTURE IN PICTURE) PCB Ass'y & PIP INTERFACE PCB Ass'y]

° The normal analog video signal is sent to a circuit that includes ENCODER, DECODER, A/D CONVERTER, MEMORY, D/A CONVERTER and MEMORY CONTROLLER. Digital processing is performed and picture in picture function produces two pictures.

The basic circuit composition is the same as the AV-3290S and AV-3590S, expect for only the PIP function. Therefore, only the differing points are indicated below. Refer to the AV-3590S SERVICE MANUAL (No.50341, issued August 1990) regarding other sections.

The circuit block diagram is shown in Fig. A.

●IC011

In event the sub picture is absent, without an input, or noisy, video muting is applied to produce a black screen. The detection signal(muting signal) is produced by this IC. The function operates by dividing the sub picture video signal and detecting presence or absence of synchronization signal.

●IC012

If the sub picture signal is absent or without an input, due to the lack of synchronization signal in the sub picture, quivering or vertical roll can occur in the main picture. This circuit produces a still sub picture even in absence of an input signal. The main picture signal(synchronization signal) is switched and sent to the sub synchronization input of the memory controller. The circuit operates by detecting the video muting signal sent from IC011 when the sub picture signal is absent.

●IC013

In order to produce a completely black picture when the video muting signal from IC011 indicates absence of a sub picture input signal, the internal switches operate to mute Y, R-Y and B-Y.

●IC008, IC009

Clock oscillator for memory controller read-in and write-in. Provided in order to avoid operating error due to weak or deteriorated input signals.

●IC004, IC005

A/D converter and D/A converter. Include built-in multiplexers required during input and output (input : for R-Y and B-Y, output : for Y).

●IC1821 [MAIN PCB Ass'y]

Normally, if the PIP mode is set while viewing the antenna(TV) input picture, the video input signal appears as the sub picture. However, if nothing is connected to the video input when setting the PIP mode, the antenna input signal also appears in the sub picture. This circuit switches and routes the antenna input signal to the video input so that it appears in the sub picture during the PIP mode.

●IC1861 [MAIN PCB Ass'y]

This circuit normally operates to switch to the TV and video input video signals. During PIP, it operates to interchange(SWAP) the main and sub pictures and switch to the sub picture input mode.

●IC8251 [PIP INTERFACE PCB Ass'y]

When equipment is connected to S-VIDEO IN, this circuit switches automatically from composite video Y/C signal to separate Y/C signals via S-VIDEO IN.

Switch states in various modes (MAIN = TV, SUB : VIDEO (composite) input)

IC / MODE	MAIN PCB ASS'Y		PIP I/F PCB ASS'Y	PIP PCB ASS'Y			
	IC821	IC861	IC221	IC001	IC010	IC012	IC013
PIP operation	ON	V	V	MAIN or SUB	MAIN or SUB	SUB	ON
S-VIDEO input	↑	↑	Y/C	↑	↑	↑	↑
SWAP operation	↑	TV	TV	↑	↑	↑	↑
SUB picture input absent	↑	V	V	↑	↑	MAIN	OFF (MUTE)
Normal (PIP = OFF)	OFF	V	V	—	—	—	—

※ ↑ = same as above

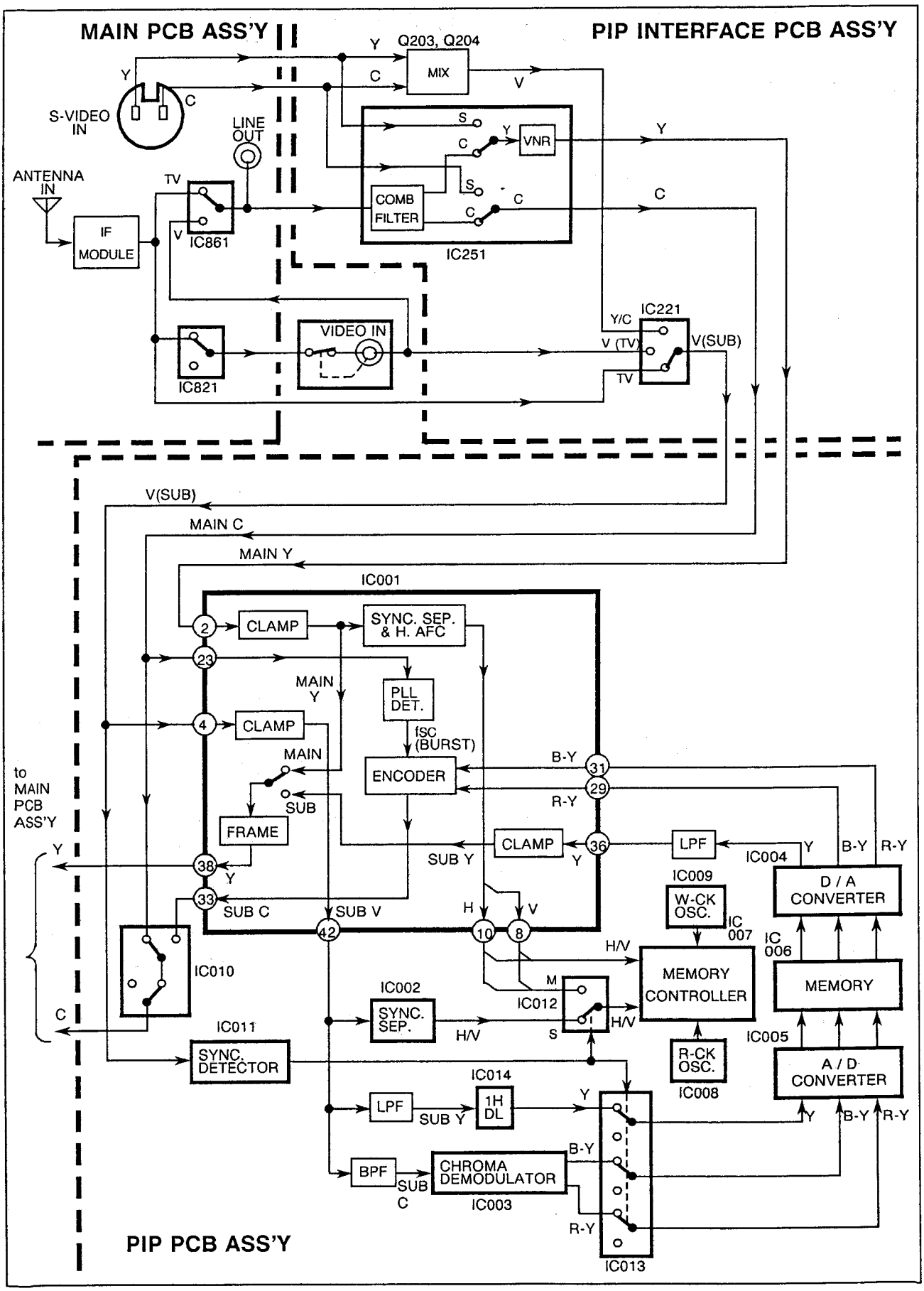


Fig. A PIP UNIT BLOCK DIAGRAM

SPECIFIC SERVICE INSTRUCTIONS

■ DISASSEMBLY PROCEDURE

●REMOVING THE REAR COVER

- Check that the power cord is disconnected from the outlet.

1. Take out 11 screws Ⓐ indicated in Fig. 1.
2. Disconnect the power cord from the rear cover and pull the cover outward to remove it.

※ When reinstalling the rear cover, carefully push it inward after inserting the main chassis into the rear cover groove.

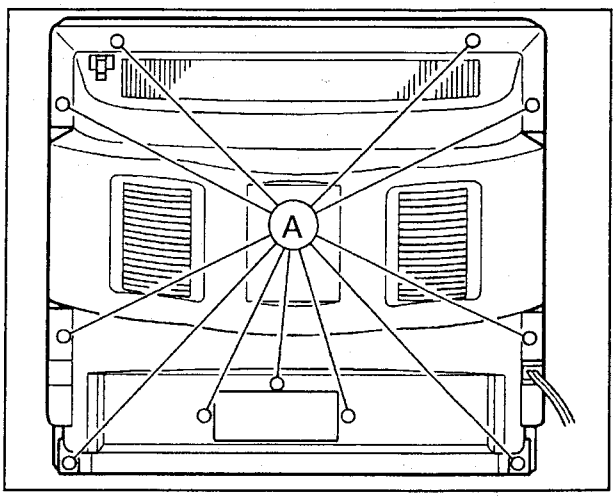


Fig. 1

●MAIN CHASSIS EXTRACTION

- Remove the rear cover.

1. Slightly raise the chassis and pull it outward (Fig. 2).

※ Disengage wire clamps as required.

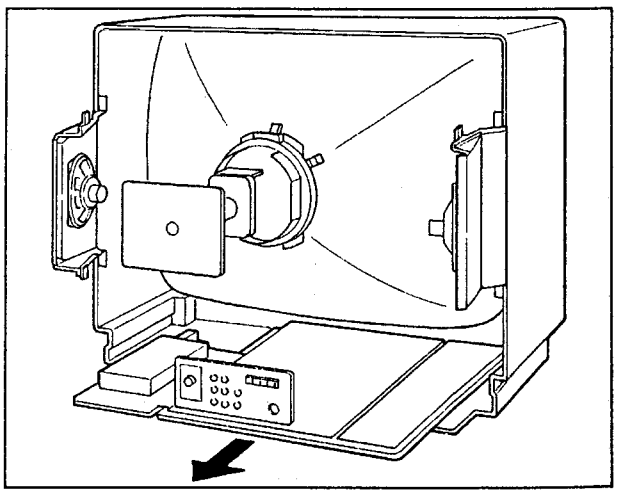


Fig. 2

●REMOVING THE SPEAKERS

- Remove the rear cover.

1. Take out 2 screws Ⓑ indicated in Fig. 3.
2. Take out 4 screws Ⓒ.

※ Fig. 3 indicateds only the right speaker. Remove the left speaker in the same manner.

※ When installing the speaker grille, use care to properly engage the grooves with the cabinet.

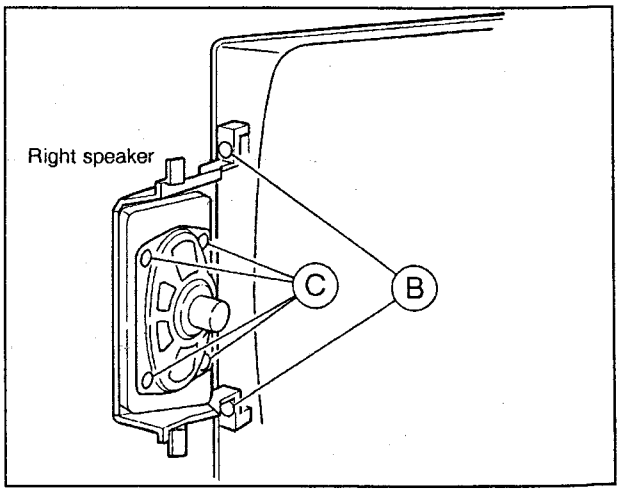


Fig. 3

•REMOVING THE MTS PCB ASS'Y

- Remove the rear cover.

1. Pull the MAIN PCB Ass'y outward and unsolder the connections indicated in Fig. 4.

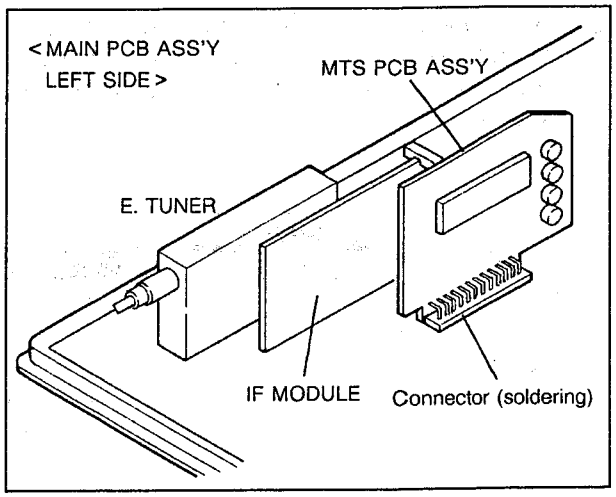


Fig. 4

•REMOVING THE PIP UNIT

- Remove the rear cover.

1. Pull out the main chassis. Take out 3 screws Ⓓ indicated in Fig. 5, pull the unit outward and raise it to remove.

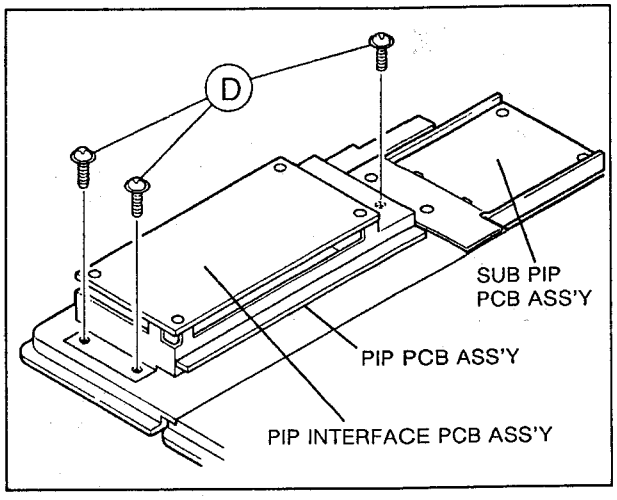


Fig. 5

•SETTING UP THE MAIN CHASSIS FOR CHECK & REPAIR

- Remove the rear cover.

1. Stand the set on the PIP unit side as indicated in Fig. 6. Disengage wire clamps and connectors as required.

※ During energized checks, use paper or other insulation to prevent contact between the MAIN PCB Ass'y and CRT SOCKET PCB Ass'y or other energized components.

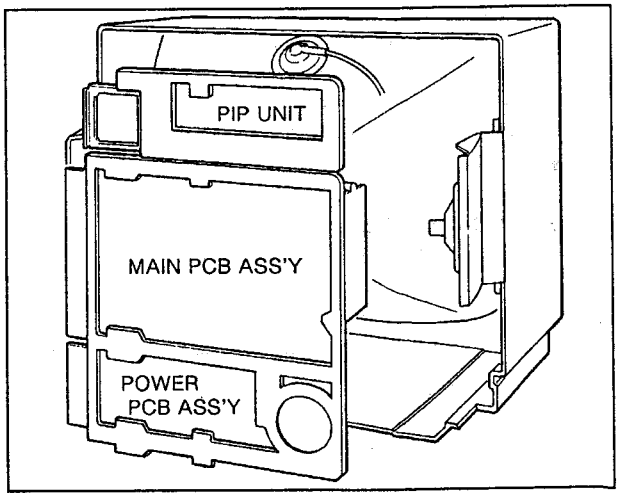


Fig. 6

•WIRE CLAMPING AND CABLE TIES

- Be sure to clamp the wire.
  Never remove the cable tie used for tying the wires together.
  Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

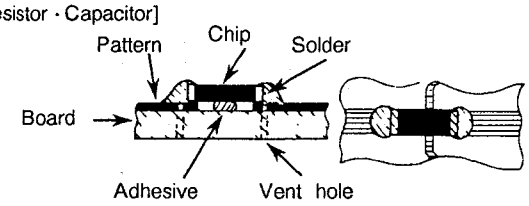
■ REPLACEMENT OF CHIP COMPONENTS

- **CHIPS ARE NOT USED ON CERTAIN MODELS. REFER TO THE DESCRIPTIONS ON THIS PAGE ONLY WHEN WORKING ON MODELS ON WHICH CHIPS ARE EMPLOYED.**

Replacement of the chip on printed circuit board can be performed easily as follows.

1 **When mounted**

[Resistor · Capacitor]

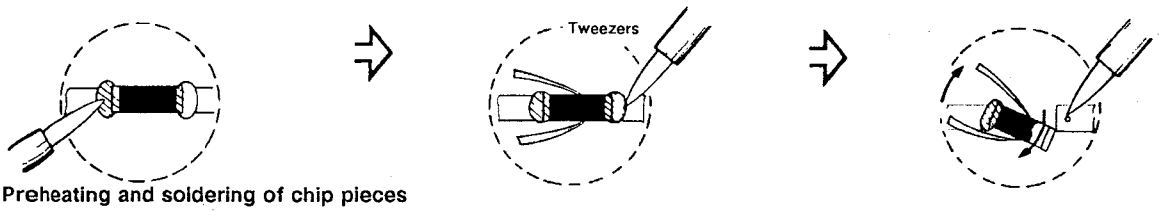


2 **Removal of the chip**

(1) Remove either of the soldered contacts.

(2) Hold the chip with tweezers and remove the other contact.

(3) Work the chip free from the adhesive with tweezers.

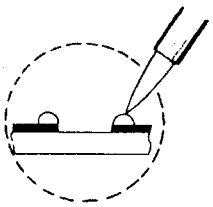


3 **Preheating and soldering of chip pieces**

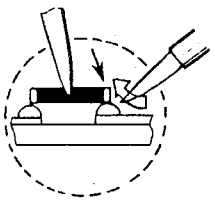
Be sure to preheat chip pieces (except the transistor) especially the capacitor before soldering with hot air, about 150°C (hair dryer or such can be used) for about 2 minutes. Then, immediately solder with an iron of about 30W.

4 **Replacing the chip pieces**

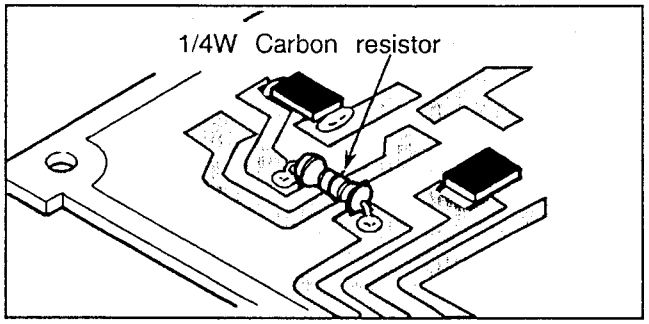
(1) Apply the solder to the board first.



(2) Hold the chip with tweezers and solder it in place, hold the iron at a 45° angle when soldering.

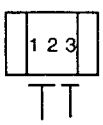


- Discrete parts can be substitutionally mounted as shown in the figure on the right.
  Mounting is also possible by passing the wires from the board front side (parts side) through the chip soldering hole (vent hole of registration part).
  Substitute parts are as follows.
  - Chip Metal Glaze Resistor
    →Carbon Resistor 1/4W ±5%
  - Chip Ceramic Capacitor
    →Ceramic Capacitor 50V ±5%



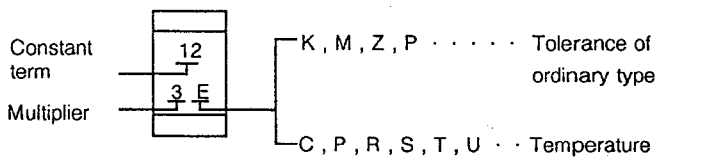
- Decoding of chip parts constant terms

<Chip Metal Glaze Resistor>



Constant term: 12
Multiplier: 3
12×10^3 = 12000Ω = 12kΩ

<Chip Ceramic Capacitor>



12×10^3 = 12000pF = 0.012μF

SERVICE ADJUSTMENTS

■PRIOR TO STARTING ADJUSTMENT

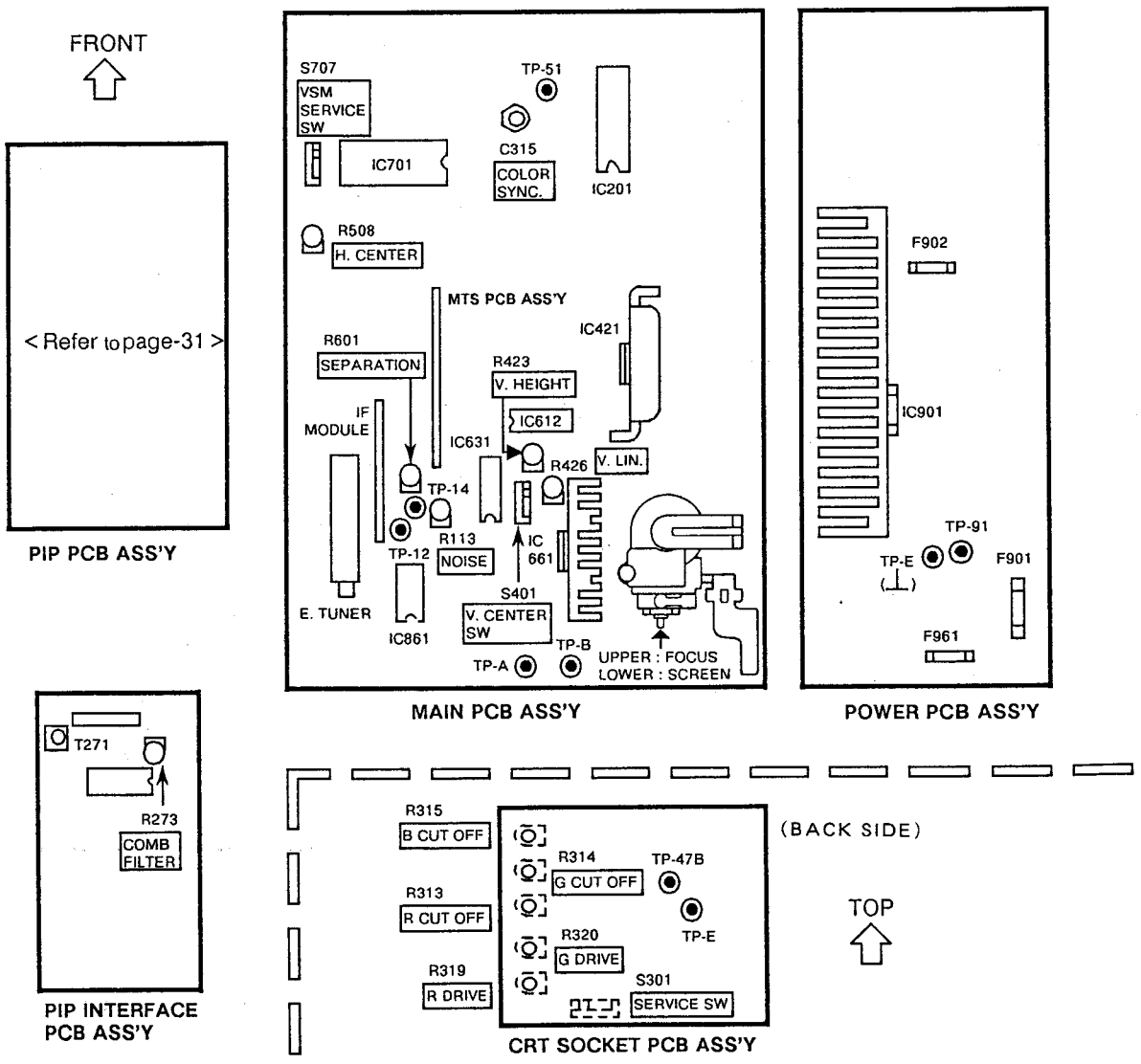
- Allow set and test equipment to warm up fully before adjusting.
- Confirm proper AC 120V power supply input.
- Set AV STATUS (BRIGHT, PICTURE, COLOR etc.) to standard settings.
- Use care not to disturb controls other than those mentioned in the adjustment steps.
- Unless otherwise mentioned, use a reception signal that provides the optimum picture for adjustment.

■TOOLS AND FIXTURES FOR ADJUSTMENT

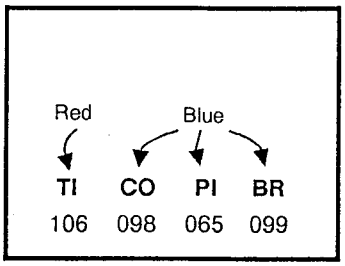
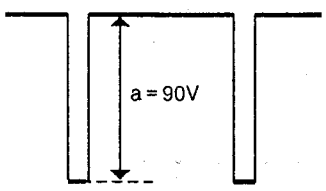
●MEASURING INSTRUMENTS

1. DC voltmeter (Digital DC voltmeter)
2. Oscilloscope
3. Frequency counter
4. Pattern generator (NTSC type)
5. TV multichannel sound generator
6. Remote control unit (RM-C687)

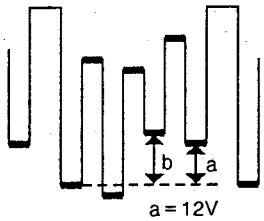
■ADJUSTMENT LOCATIONS



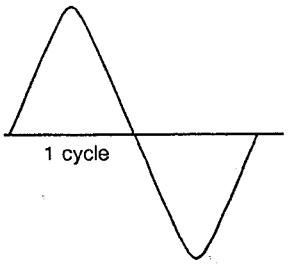
■ ADJUSTMENT PROCEDURE

Item	Measuring instrument	Test point	Adjustment part	Description
●POWER CIRCUIT				
B1 POWER SUPPLY check	DC voltmeter	TP-91 TP-E (⊥)		1. Confirm that the voltage between **TP-91** and **TP-E** (⊥) is **DC 129.3V**.
●MAIN CIRCUIT				
NOISE (RF AGC) adjustment			NOISE VR (R135)	1. Adjust the **NOISE VR** so that the noise appears in the picture. 2. Next the **NOISE VR** in a direction that the noise disappears from the picture and stop at the point where the noise has disappeared from the picture. 3. Turn to another channel and confirm that there are no abnormal ities.
SUB BRIGHT adjustment	Pattern generator Remote control unit  Screen produced by setting the VSM SERVICE switch to the service mode and pressing a remote control unit FUNCTION key.		VSM SERVICE switch (S707)	1. Use the remote control unit and reset the AV STATUS(TINT, COLOR, PICTURE, BRIGHT and DETAIL) . 2. Set the **VSM SERVICE switch** to the S position. 3. Press a FUNCTION key(△, ▽, +, -) of the remote control unit. Confirm picture as indicated in the figure. 4. Select BRIGHT and adjust the +/- key to optimum brightness. 5. After adjusting, return the **VSM SERVICE switch** to N position.
SUB PICTURE adjustment	Pattern generator Oscilloscope (H-rate 10:1) Remote control unit	TP-47B [CRT SOCKET PCB Ass'y]	VSM SERVICE switch (S707)	1. Use the remote control unit and reset the AV STATUS(TINT, COLOR, PICTURE, BRIGHT and DETAIL) . 2. Receive the crosshatch signal. 3. Set the **VSM SERVICE switch** to the S position. 4. Correct the oscilloscope to **TP-47B** 5. Select PICTURE and adjust the +/- keys so that waveform "a" indicated inthe figure is **90V**. 6. After adjusting, return the **VSM SERVICE switch** to N position. 

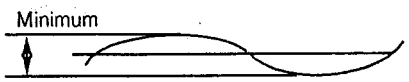
Item	Measuring instrument	Test point	Adjustment part	Description
SUB COLOR & TINT adjustment	Pattern generator Oscilloscope (H-rate 10:1) Remote control unit	TP-47B [CRT SOCKET PCB Ass'y]	VSM SERVICE switch (S707)	1. Use the remote control unit and reset the AV STATUS(TINT, COLOR, PICTURE, BRIGHT and DETAIL) . 2. Receive the color bar signal. 3. Set the **VSM SERVICE switch** to the S position. 4. Correct the oscilloscope to **TP-47B** 5. Press a FUNCTION key(△, ▽, +, -) of the remote control unit. Confirm picture as indicated in the figure. 6. Select COLOR and adjust the +/- keys so that waveform "a" indicated in the figure for **12V**. 7. Select PICTURE and adjust the +/- keys so that waveform "b" indicated in the figure for **25V**. 8. Repeat above steps 6 and 7 to obtain the specified values for waveform "a" and "b" . 9. After adjusting, return the **VSM SERVICE switch** to N position.
COLOR SYNCHRONI-ZATION adjustment	Pattern generator Oscilloscope (H-rate 10:1)	TP-51 IC101 pin-㉝ IC101 pin-㊶ (9V line)	COLOR SYNC. trimmer capacitor (C315)	1. Receive the color bar signal. 2. Use ashorting clip or other means to connect **TP-51, IC101 pin-㉝** and **IC101 pin-㊶** (9V line) . 3. Adjust the **COLOR SYNC. trimmer capacitor** to change the picture from color stripes to still color bar. 4. Remove the connections and check that the color synchronization does not deteriorate on any of the channels.
SEPARATION adjustment	TV multi - channel sound generator Oscilloscope (H-rate 10:1)	VARIABLE AUDIO OUTPUT L & R	SEPARATION VR (R601)	1. Set the TV multichannel sound signal generator for generating stereo signal and output signal of about 3kHz from the left channel. 2. Connect an oscilloscope to the "L" output and obtain a clear view of 1-cycle portion of 3kHz waveforms. 3. Change connection of the oscilloscope to the "R" output and expand the voltage axis. 4. Adjust the **SEPARATION VR** and minimize the 3kHz crosstalk portion.
FOCUS adjustment			FOCUS VR (built-in FBT)	1. Adjust the **FOCUS VR** to obtain clear pictures. 2. Check that pictures have been adjusted to optimum appearance in both center and peripheral areas of the screen.



a = 12V
b = 25V



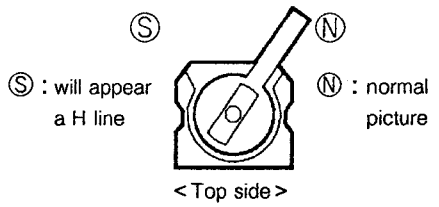
L - Channel signal waveform



R - Channel crosstalk portion

Item	Measuring instrument	Test point	Adjustment part	Description
VERTICAL HEIGHT & LINEARITY adjustment	Pattern generator		V HEIGHT VR (R423) V LIN. VR (R426)	1. Receive a picture that enable a vertical symmetry to be checked. 2. Turn the **V HEIGHT VR** to compress the picture vertically. 3. Adjust the **V LIN. VR** to where the picture is symmetrical top and bottom. 4. Again adjust the **V HEIGHT VR** to return the normal height.
VERTICAL CENTER adjustment			V. CENTER switch (S401)	1. The **V. CENTER switch** can be used to shift the picture up and down. ※ Use this function as required for **"VERTICAL HIEGHT & LINEARITY"**, and other adjustments.
HORIZONTAL CENTER adjustment	Pattern generator		H. CENTER VR (R508)	1. Turn the **H. CENTER VR** and adjust for the optimum left and right position. ※ Where possible, use a symmetrical pattern such as a circle or crosshatch.

•CRT SOCKET CIRCUIT

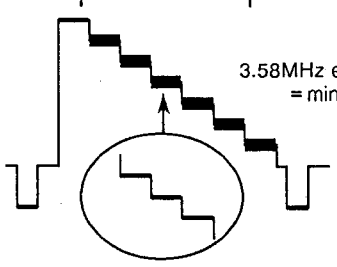
HORIZONTAL LINE display			SERVICE switch (S301)	1. Turning the **SERVICE switch** from the N side to the S side will bring the horizontal line display to the screen. 

•MULTI-CHANNEL SOUND CIRCUIT

• Do not touch the VRs inside the MTS PCB ASS'Y.

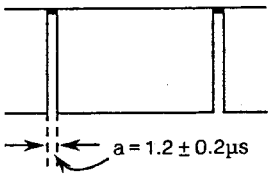
•PIP INTERFACE CIRCUIT

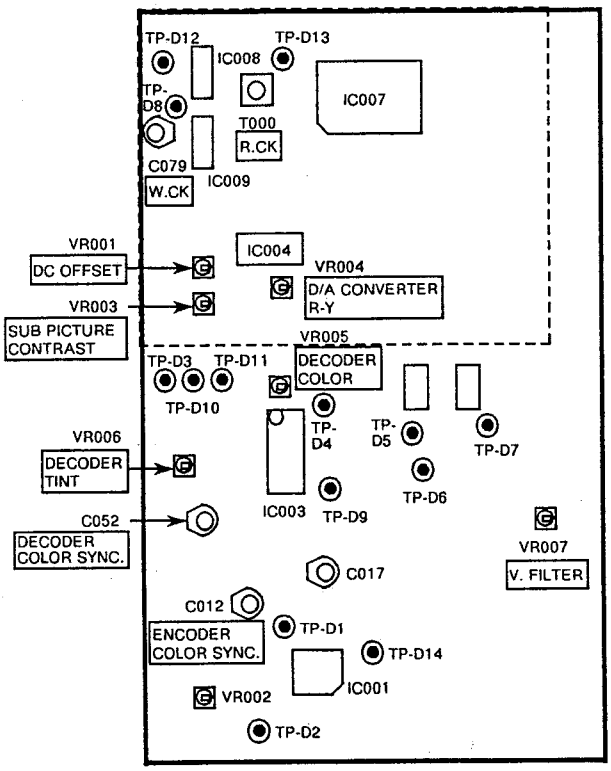
COMB FILTER adjustment	Pattern generator Oscilloscope (H-rate 10:1)	IC251 pin-⑫	DL PHASE transformer (T271) COMB FILTER VR (R273)	1. Receive the color bar signal. 2. Connect the oscilloscope to **pin-⑫ of IC251.** 3. Magnify the chroma signal portions of the color bar waveform so that the 3.58MHz elements become easy to observe. 4. Adjust the **DL PHASE transf.** and minimize the 3.58MHz elements. 5. Regulate the **COMB FILTER VR** to further minimize the 3.58MHz elements. 6. Repeat steps 4 and 5 to fully minimize the 3.58MHz elements.



Item	Measuring instrument	Test point	Adjustment part	Description

• PIP CIRCUIT

READ CLOCK adjustment	Frequency counter	TP-D12 TP-D13	R.CK transformer (T000)	1. Use shorting clips or other means to short **TP-D12** to the 5V line. 2. Connect the frequency counter to **TP-D13**. Adjust **R.CK transf.** to obtain **30.2MHz ± 10kHz.**
WRITE CLOCK INTERVAL adjustment	Pattern generator Oscilloscope (H-rate 10:1) Remote control unit	TP-D8	W.CK trimmer capacitor (C079)	1. Receive the crosshatch signal to both TV(antenna) and VIDEO input. 2. Set for the PIP mode. 3. Connect the oscilloscope to **TP-D8**. Adjust **W.CK trimmer capacitor** to interval "a" in figure to **1.2 ± 0.2µs.** 
ENCODER COLOR SYNCHRONI-ZATION adjustment	Pattern generator Oscilloscope (H-rate 10:1)	TP-D1 TP-D14	ENCODER COLOR SYNC. trimmer capacitor (C012)	1. Receive the color bar signal. 2. Set for the PIP mode. 3. Use shorting clips or other means to short **TP-D1** to **TP-D14.** 4. Adjust **ENCODER COLOR SYNC trimmer capacitor** until when the color changes from strip pattern to color bar and almost stands still. 5. Remove the connection between **TP-D1** and **TP-D14.** 6. Check that when the channel is changed and return to color bar, it immediately catches without color synchronization being destroyed.



FRONT

PIP PCB ASS'Y

Item	Measuring instrument	Test point	Adjustment part	Description
DECODER COLOR SYNCHRONIZATION adjustment	Pattren generator Frequency counter Remote control unit	PY connector pin-⑤ TP-D4 TP-D9	DECODER COLOR SYNC. trimmer capacitor (C052)	1. Use shorting clips or other means to connect **PY connector pin-⑤** to ground. 2. Receive the color bar signal to both TV(antenna) and VIDEO input. 3. Set for the PIP mode. 4. Use shorting clips or other means to connect **TP-D4** to 5V line. 5. Connect the frequency counter with **TP-D9.** 6. Adjust **DECODER COLOR SYNC trimmer capacitor** so that the frequency is **3.579545MHz ± 50Hz.** 7. Remove the connection between **TP-D4** and the 5V line.
SUB PICTURE COLOR DEMODULATION LEVEL adjustment	Pattren generator Oscilloscope (H-rate 10:1) Remote control unit	TP-D6 TP-D11 TP-D10	DECODER TINT VR (VR006) DECODER COLOR VR (VR005) D/A CONVERTER R-Y VR (VR004)	1. Receive the color bar signal to both TV(antenna) and VIDEO input. 2. Set for the PIP mode. 3. Connect the oscilloscope to **TP-D6.** Adjust the **DECODER TINT VR** so that the right rising component of the waveform is straight, as indicated in Fig. A. 4. Adjust the **DECODER COLOR VR** so that the waveform in Fig. A is **600mVp-p.** 5. Connect the oscilloscope to **TP-D11.** Confirm waveform and **300 ± 30mVp-p** as indicated in Fig. A. If waveform sharp and value differ, repeat above steps 3 and 4. 6. Connect the oscilloscope to **TP-D10.** Adjust the **D/A CONVERTER R-Y VR** to obtain **420mVp-p** waveform level as indicated in Fig. B.
VERTICAL FILTER adjustment	Pattren generator Oscilloscope (V-rate 10:1) Remote control unit	TP-D7	V. FILTER VR (VR007)	1. Receive the color bar signal to both TV(antenna) and VIDEO input. 2. Connect the oscilloscope to **TP-D7.** 3. Set for the PIP mode and adjust **V. FILTER VR** so that the heights of the white of the two waveforms
SUB PICTURE DC OFFSET adjustment	Pattren generator Oscilloscope (V-rate 10:1) Remote control unit	TP-D2	DC OFFSET VR (VR001)	1. Receive the full white signal with color burst to both the TV(antenna) and VIDEO input. 2. Set for the PIP mode. 3. Connect the oscilloscope to **TP-D2** and adjust **DC OFFSET VR** to minimize the sub picture color

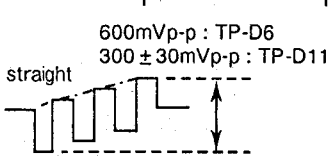


Fig. A -B-Y-

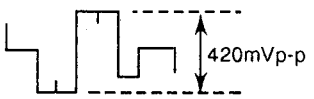
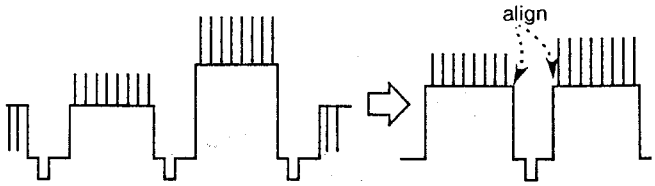
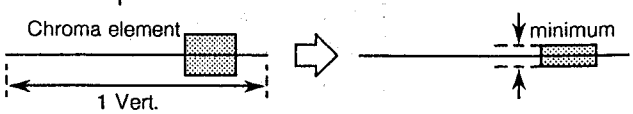
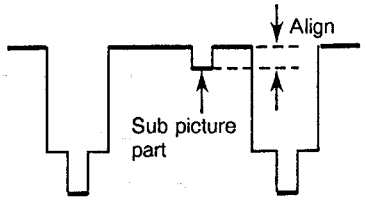
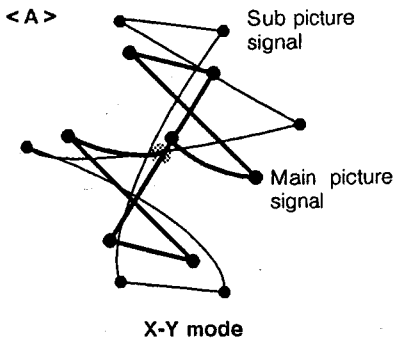
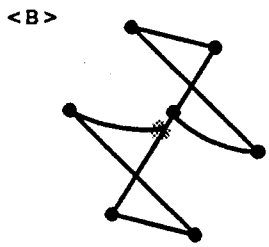


Fig. B -R-Y-





Item	Measuring instrument	Test point	Adjustment part	Description
MAIN / SUB BRIGHTNESS RATIO adjustment	Pattern generator Oscilloscope (H-rate 10:1) Remote control unit	PY connector pin-⑤ PY connector pin-①	SUB PICTURE CONTRAST VR (VR003)	1. Use shorting clips or other means to connect **PY connector pin-⑤** to ground. 2. Receive the full white signal with color burst to both the TV(antenna) and VIDEO input. 3. Set for the PIP mode. 4. Connec the oscilloscope to **PY connector pin-①**. Adjust **SUB PICTURE CONTRAST VR** to equalize the main sub picture levels, as indicsted in figure. 
MAIN / SUB COLOR & TINT RATIOS adjustment	Pattern generator Oscilloscope (H-rate 10:1) Remote control unit	K connector pin-②(R-Y) K connector pin-④(B-Y) [CRT SOCKET PCB ASS'Y]	DECODER TINT VR (VR006) DECODER COLOR VR (VR005)	1. Receive the color bar signal to both TV(antenna) and VIDEO input. 2. Set for the PIP mode. 3. Connect the oscilloscope to CRT SOCKET PCB ASS'Y **K connector pin-②**(R-Y) and **pin-④**(B-Y). 4. Set the oscilloscope mode to X-Y. 5. As shown in the figure, adjust **DECODER TINT VR** to align the sub picture phase with the main picture red phase. 6. Then adjust **DECODER COLOR VR** to equalize the sub and main picture saturation levels.  **X-Y mode**  **COLOR and TINT aligned for main and sub picture.**

●HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. High voltage hold down circuit (in MAIN PCB ASS'Y)

- After repair of the high voltage hold down circuit shown in Fig. 1, this circuit shall be checked to operate correctly.

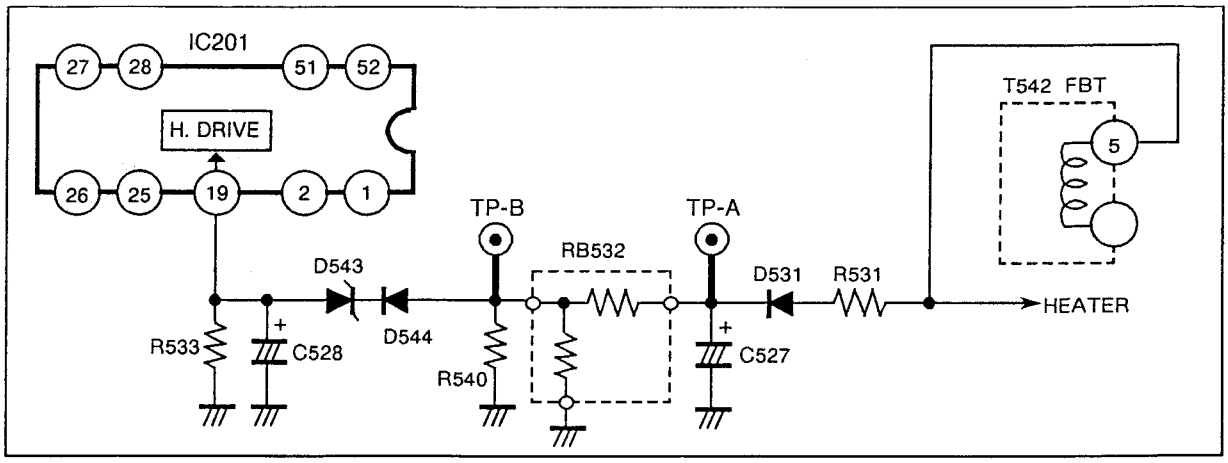


Fig. 1

2. Checking method of the high voltage hold down circuit (in POWER PCB ASS'Y)

(1) Make the short circuit across R905 and R909, (shown in Fig. 2) under normal operating condition.

(2) Confirm the picture goes out.

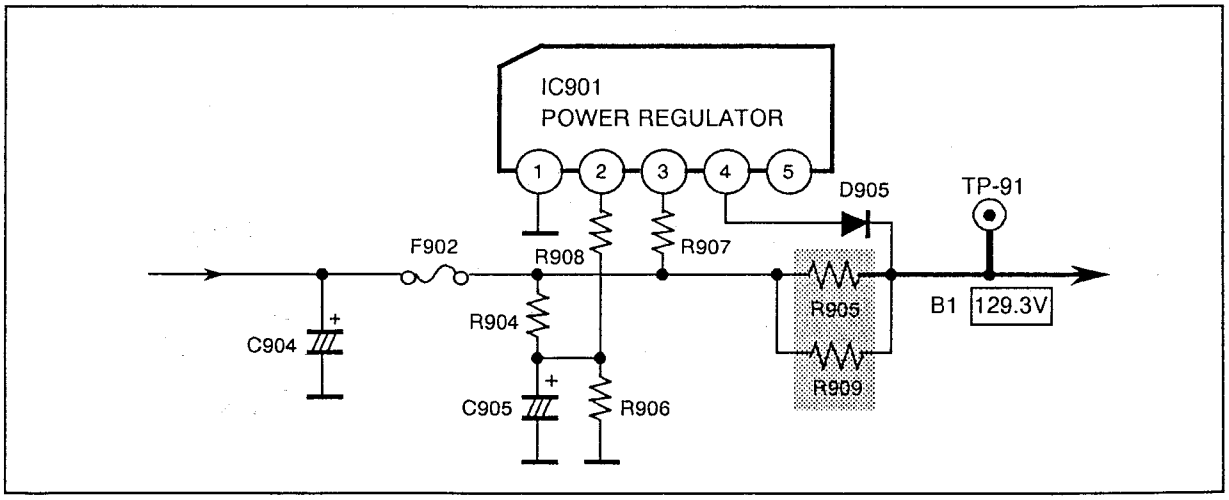


Fig. 2

■ PURITY, CONVERGENCE AND WHITE BALANCE ADJUSTMENTS

* The locations of SERVICE SWITCH, SCREEN VR, CUT-OFF VR and DRIVE VR are described in the ALIGNMENT LOCATION of SERVICE ADJUSTMENT or the SCHEMATIC DIAGRAM.

•PICTURE TUBE

The picture tube is a precision in-line gun type. For this picture tube, dynamic convergence is carried out by a precision deflection yoke which eliminated the use of convergence yoke and convergence circuit. The adjustment of picture tube is therefore made easier as only the adjustment of static convergence by using a magnetic is enough. The deflection yoke and purity/convergency magnets assembly has been set at the factory and requires no field adjustments. However, should the assembly be accidentally jarred or tampered with, some or all adjustments may by necessary.

•COLOR PURITY & VERTICAL CENTER

Loosen yoke retaining screw (Fig. B-1) . With a sharp knife cut between the picture tube and the wedge. Remove wedges completely and clean off dried adhesive from the picture tube. PAINT is used to lock the tabs of the purity/convergence magnet assembly in place (Fig. B-1) . The paint must be removed with the end of a screwdriver before any adjustments are attempted.

(As to models equipped with a magnet locking ring, beforehand loosen it.)

1. Select no signal UHF channel. (or Display a monochrome pattern)
2. Let the purity tabs come in line horizontally as is shown in Fig. B-2. A long tab should be in the same direction as the other short tab.
3. Move the yoke slowly backward.
4. Turn the GREEN CUT-OFF VR to maximum and the RED and BLUE CUT-OFF VRs to minimum. Then adjust the SCREEN VR so that the green band can be seen best. (Fig. B-3)
5. Rotate the two tabs in the opposite directions and with them kept at an angle, together in either direction so that the green band is centered on the picture tube.
6. Check the vertical center position by displaying a horizontal line. (Select the CUT-OFF SERVICE SWITCH from N to S and a HORIZONTAL LINE will appear.) Unless correct, bring it to the nearest center by rotating the two tabs, kept at an angle, together in either direction. (Fig. B-4)
7. Repeat steps 5 and 6 alternately until the green band and the vertical center come to the center.
8. Move the yoke slowly towards the bell of the tube so that the whole surface of the picture tube is filled with a green pure raster.
9. Turning RED or BLUE CUT-OFF VR to maximum and GREEN CUT-OFF VR to minimum, make sure of a red or blue pure raster.
10. Secure yoke retaining screw (do not install wedges at this time) .

(As to models equipped with a magnet locking ring, secure it and keep six magnets from moving even if it is touched slightly.)

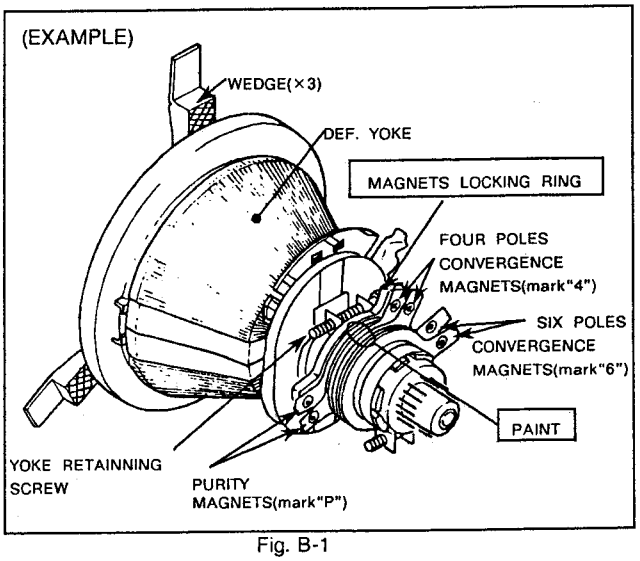


Fig. B-1

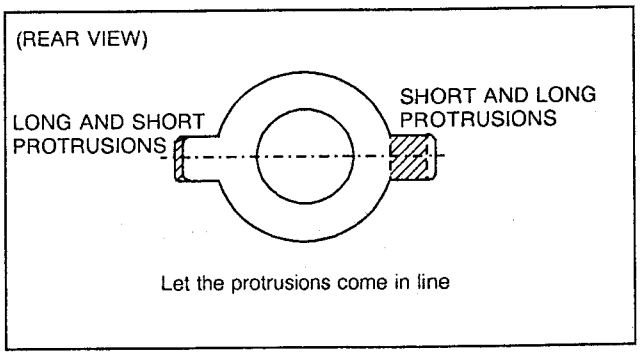


Fig. B-2

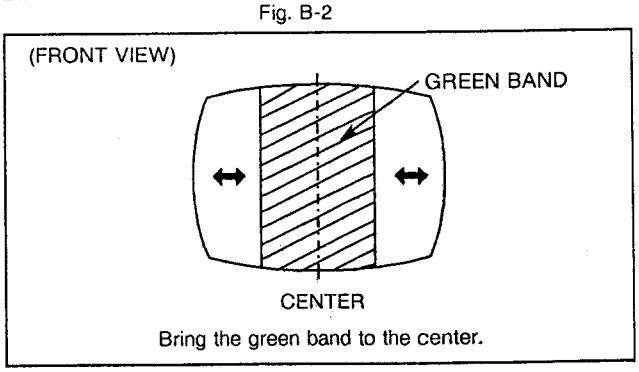


Fig. B-3

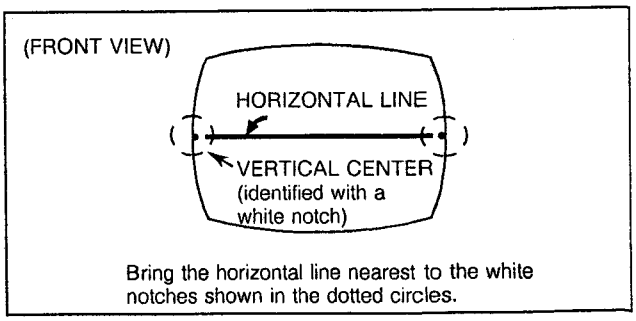


Fig. B-4

•STATIC CONVERGENCE & DYNAMIC CONVERGENCE

1. Connect a crosshatch generator to the input terminals and adjust BRIGHTNESS and CONTRAST control for a distinct pattern.
2. Adjust the convergence around the edges of the picture tube by tilting the yoke, up-down and left-right, and temporarily install one wedge at the top of the yoke. (Fig. B-7, 8, 9)
3. Rotate the front pair of tabs (four pole convergence magnet) as a unit to minimize the separation of the red and blue lines around the center of the screen. To adjust the convergence of red and blue, vary the angle between the tabs (Fig. B-5)
4. Rotate the rear pair of tabs (six pole convergence magnets) as a unit to minimize the separation of the magenta (R/B) and green lines. (Fig. B-6)
5. Adjust the spacing of the rear tabs to converge the magenta and green lines.
6. Apply paint to fix six magnets.
   (As to models equipped with a magnet locking ring, tighten it.)
7. Remove the wedge installed temporarily on the yoke.
8. Tilting the angle of the yoke up, down and sideways, and adjust the yoke so as to obtain the circumference convergence. (Fig. B-8, 9)
9. Insert wedges to the position as shown in Fig. B-10 to obtain the best circumference convergence.
10. Wedge has a backing of double sided adhesive tape. Therefor, tear off one side of adhesive tape, and fix the wedges.
11. White balance adjustment (Black & White tracking) can now be performed.

•WHITE BALANCE ADJUSTMENT

(Black and White Tracking)

1. Display a monochrome pattern.
2. Set the RED and GREEN DRIVE VRs for their mechanical center.
3. Turn the RED, GREEN and BLUE CUT-OFF VRs and the SCREEN VR fully counterclockwise.
4. Display a horizontal line. (Select the CUT-OFF SERVICE SWITCH from N to S and a HORIZONTAL LINE will appear.)
5. Turn SCREEN VR slowly clockwise until a very faint horizontal line appears.
6. Turn the CUT-OFF VR of the color which has appeared first, clockwise by about 10°and then adjust the SCREEN VR again so that the color may shine faintly.
7. Turn the other color CUT-OFF VRs slowly clockwise until a reasonable white line appears.
8. Return the monochrome pattern. (When returning a monochrome pattern select the CUT-OFF SERVICE SWITCH from S to N and a monochrome pattern will appear.)
9. Adjust the RED and GREEN DRIVE VRs for best white highlights.

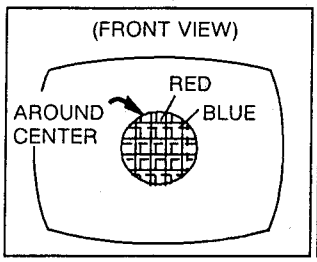


Fig. B-5

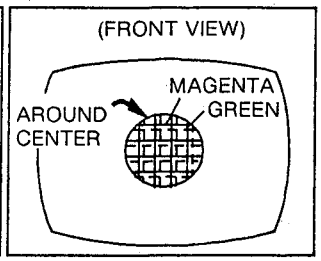


Fig. B-6

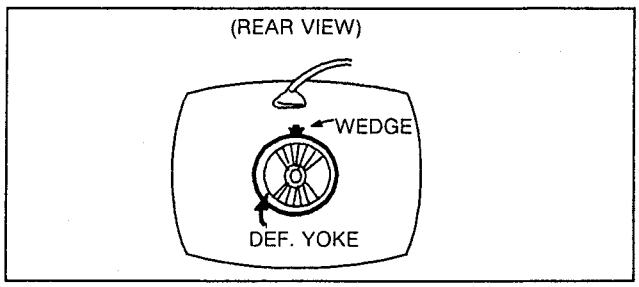


Fig. B-7

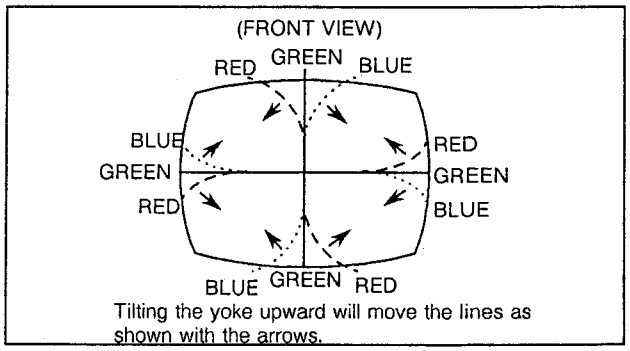


Fig. B-8

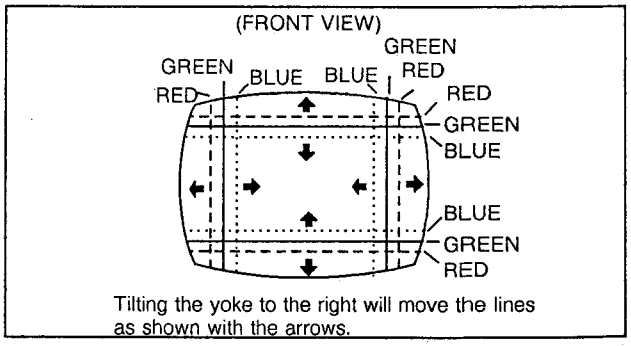


Fig. B-9

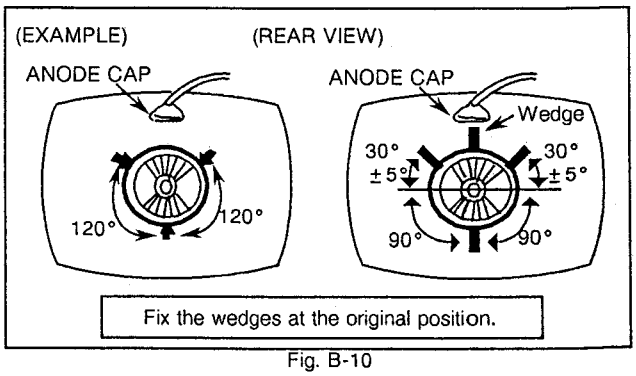


Fig. B-10

PARTS LIST

CAUTION

- The parts marked ⚠ are very important for the safety. When replacing these parts, be sure to use specified ones to secure the safety and performance.
- The module circuit board is supplied together with the assembly, but the parts which do not have the drawing in this Parts List, P. C. Board Ass'y and the Parts No. columns of which are filled with lines —— . will not be supplied.
- As a rule, the resistors and capacitors which are indicated as shown in (NOTE 2) "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board.
  When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to (NOTE 2).

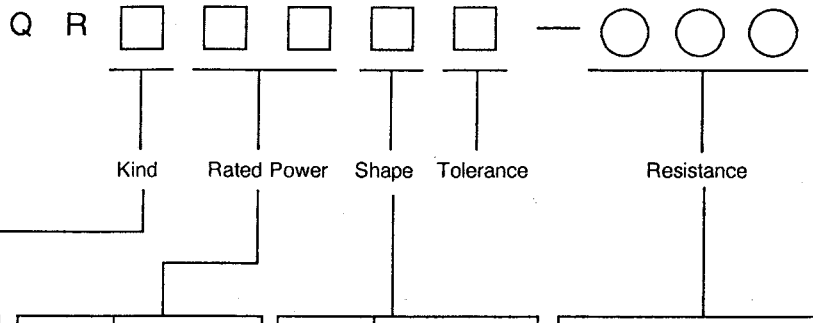
(NOTE 1) ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

(NOTE 2) HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR



Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

Symbol	Rated Power
0 1	1 w
1 2	1/2 w
1 4	1/4 w
1 6	1/6 w
1 8	1/8 w

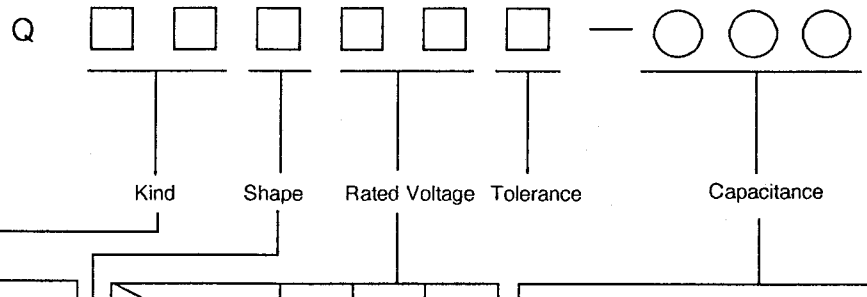
Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
please note that,in case of resistance less than 10 Ω, a letter "R"will be effective as point.

EX.

2.2 Ω	=		2R2
470 Ω	=	47×10^{1} →	471
150kΩ	=	15×10^{4} →	154

■ CAPACITOR



Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

6Figure \ 5Figure	0	1	2
A		10V	100V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

Indicate with first two-figure expressed by pF and following 0.
Please note that,in case of capacitance less than 10 pF a letter "R" will be effective as point.

EX

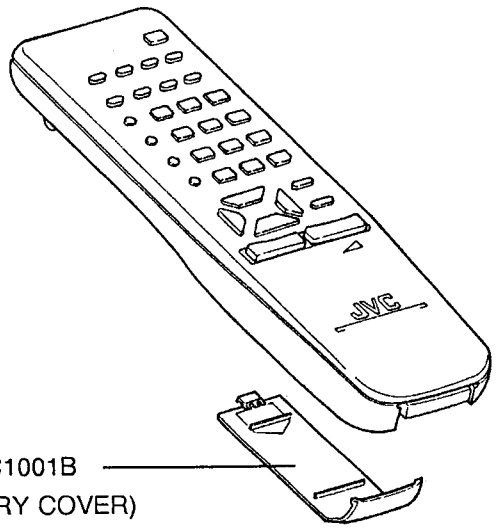
5pF	=			5R0
1000pF	=	10×10^{2}	→	102
47μF	=	47×10^{6}	→	476

Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

EXPLODED VIEW PARTS LIST

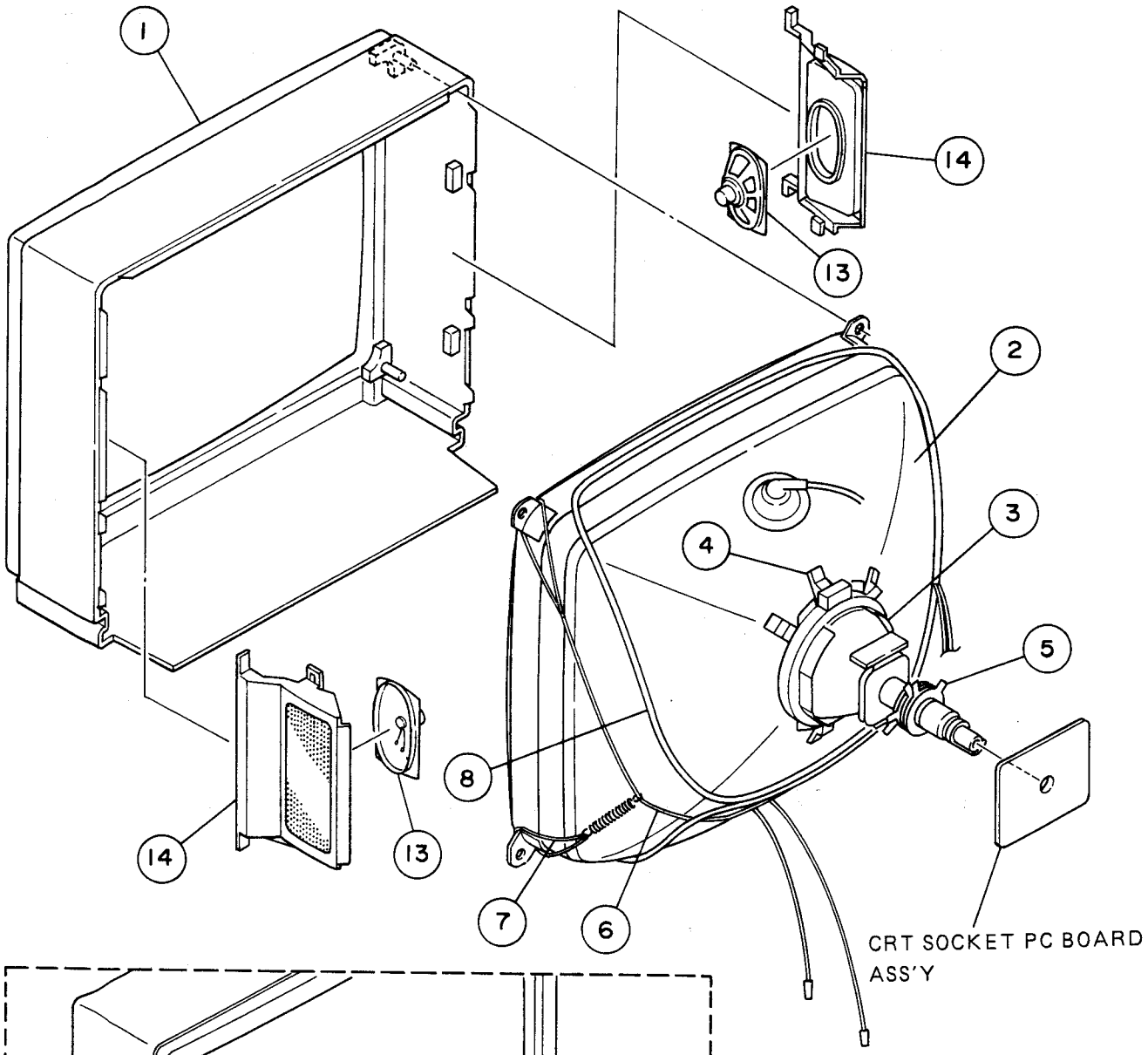
	SYMBOL NO.	PART NO.	PART NAME	REMARKS	
	1	CM11579-00D-MA	FRONT CABI ASSY		*
⚠	2	MVA68AEC00X	PICTURE TUBE	V01	*
⚠	3	CE20179-A0AKJ1	DEFLECTION YOKE	DY01	*
	4	CE41596-00AJ1	WEDGE ASSY	X4	*
	5	A75034-B	P. C. MAGNET		
	6	CH30392-00A	BRAIDED ASSY		
	7	CH43109-00A	BRAIDED SUB ASSY		
⚠	8	CE41329-00CJ2	DEGAUSSING COIL	L01	*
	9	CM33706-C0A-KD	PUSH KNOB ASSY		
	10	CM45810-A01-V0	REMOCON WINDOW		
	11	CM43094-002	JVC MARK		
	12	CM33705-004-V0	KNOB HOLDER		
⚠	13	CEBSN12D-01KJ3	SPEAKER	X2, SP01, SP02	*
	14	CM11606-A01-VA	SPEAKER GRILLE	X2	*
⚠	15	CE41735-00B-KD	F. B. T	T1542	
⚠	16	CE30178-001	POWER TRANSF	T01	
	17	CM11548-001-MA	REAR COVER		*
	18	GBSB4016N	TAPPING SCREW	X11	*
⚠	19	QMP14C0-200J3	POWER CORD		*
	20	CM44889-001-A	RATING LABEL		*

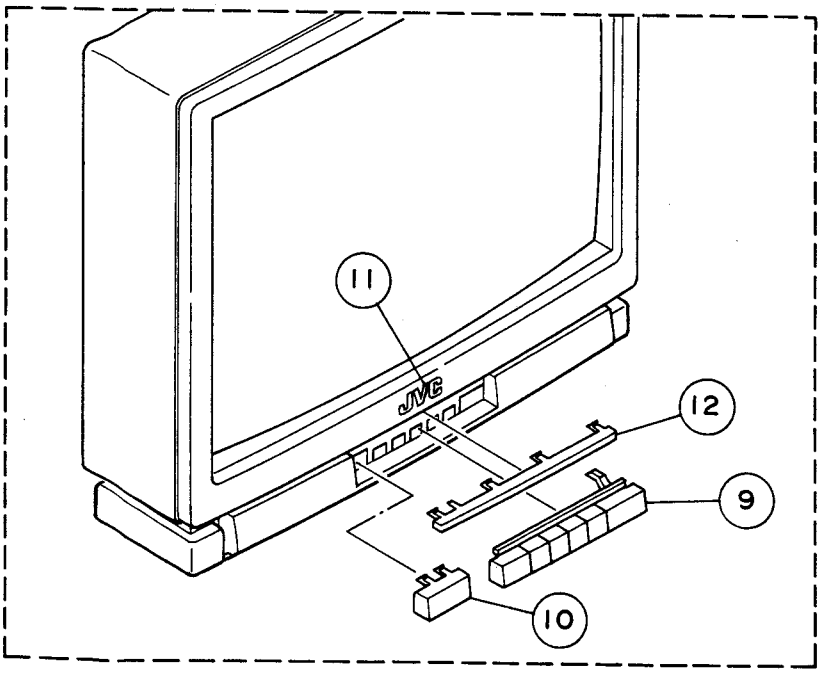
REMOTE CONTROL UNIT & PARTS LIST

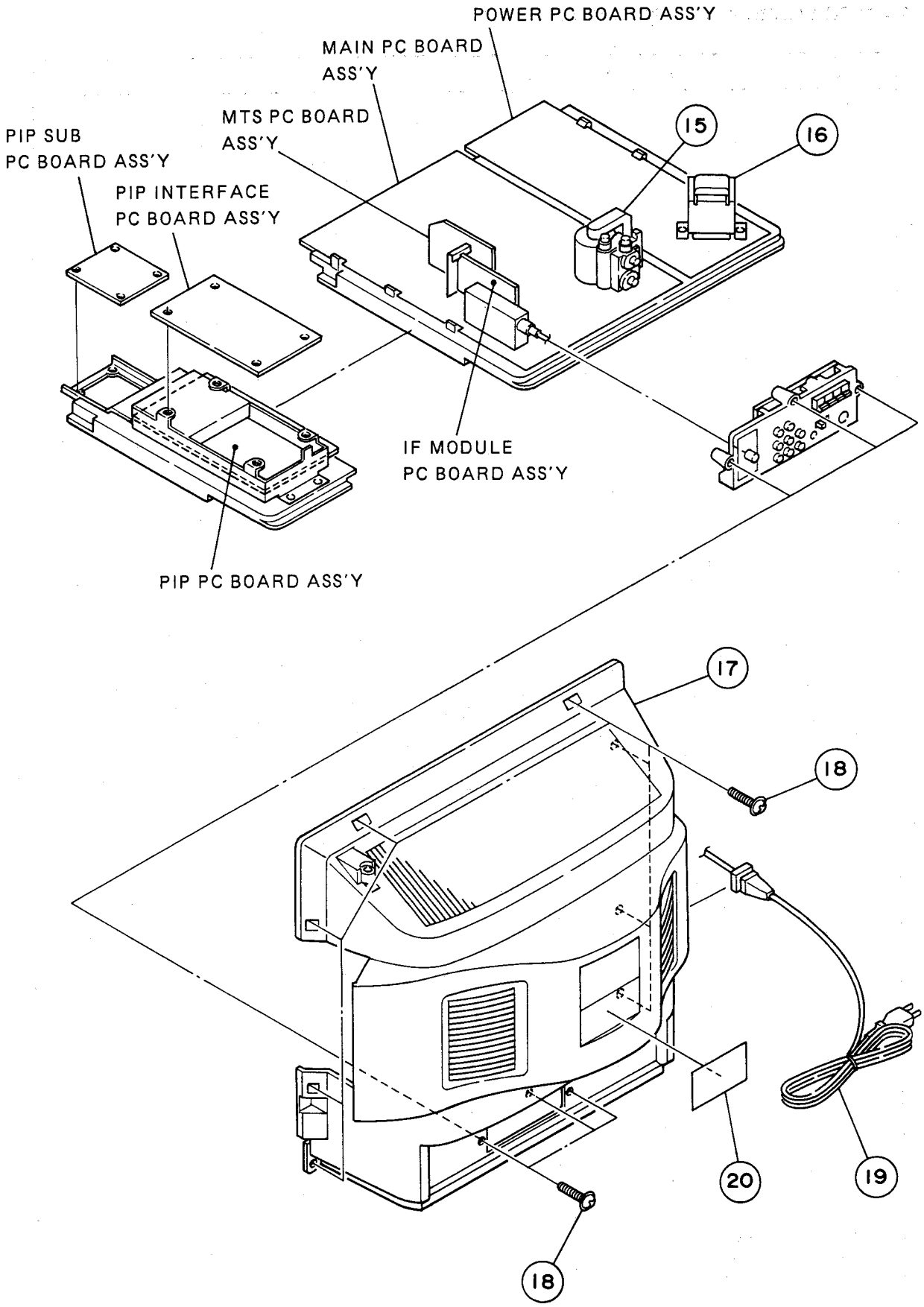


* UR52EC1001B
(BATTERY COVER)

EXPLODED VIEW






POWER PC BOARD ASS'Y
MAIN PC BOARD ASS'Y
MTS PC BOARD ASS'Y
PIP SUB PC BOARD ASS'Y
PIP INTERFACE PC BOARD ASS'Y
15
16
IF MODULE PC BOARD ASS'Y
PIP PC BOARD ASS'Y
17
18
20
19
18

PRINTED CIRCUIT BOARD PARTS LIST

MAIN PC BOARD Ass'y (SGX1011A(H2))

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	VARIABLE R			
	R1113	QVPE610-203H	TRIM R (NOISE)	20KΩ B
	R1423	QVPE610-503H	TRIM R (V. LIN)	50KΩ B
	R1508	QVPE610-201H	TRIM R (H. CENTER)	200Ω B
	R1601	QVPE610-103H	TRIM R (SEPARATIO	N) 10KΩ B
	RESISTOR			
⚠	RB1532	CJ39622-00J	RESISTOR ARRAY	
	R1001	QRZ0074-100YJ2	C R	1.0Ω 1/4W J
	R1002	QRZ0089-152XJ2	C R	1.5kΩ 1/4W J
	R1115	QRZ0074-150YJ2	C R	15 Ω 1/4W J
	R1295	QRZ0075-391YJ2	C R	390 Ω 1/2W J
	R1296	QRZ0074-150YJ2	C R	15 Ω 1/4W J
	R1424	QRX019J-1R0S	MF R	1.0Ω 1W J
⚠	R1429	QRD161J-4R7YJ2	C R	4.7 Ω 1/6W J
⚠	R1430	QRC121K-561Z	COMP. R	560 Ω 1/2W K
	R1431	QRZ0075-122YJ2	C R	1.2KΩ 1/2W J
⚠	R1432	QRZ0075-821YJ2	C R	820 Ω 1/2W J
⚠	R1512	QRZ0075-123YJ2	C R	12kΩ 1/2W J
⚠	R1525	QRG019J-391S	OM R	390 Ω 1W J
	R1526	QRV141F-2701AY	MF R	2.7kΩ 1/4W F
	R1528	QRV141F-9101AY	MF R	9.1kΩ 1/4W F
⚠	R1531	QRZ0075-4R7YJ2	C R	4.7 Ω 1/2W J
⚠	R1540	QRD161J-473YJ2	C R	47kΩ 1/6W J
	R1544	QRG029J-101A	OM R	100 Ω 2W J
	R1548	QRG019J-152S	OM R	1.5kΩ 1W J
⚠	R1549	QRG029J-680A	OM R	68 Ω 2W J
⚠	R1561	QRX039J-2R7A	MF R	2.7 Ω 3W J
⚠	R1562	QRX039J-3R3A	MF R	3.3 Ω 3W J
⚠	R1563	QRX039J-2R2A	MF R	2.2 Ω 3W J
⚠	R1564	QRD161J-223YJ2	C R	22kΩ 1/6W J
⚠	R1565	QRD161J-333YJ2	C R	33kΩ 1/6W J
⚠	R1566	QRZ0074-1R0YJ2	C R	1.0 Ω 1/4W J
	R1568	QRX029J-2R7A	MF R	2.7 Ω 2W J
	R1617	QRZ0075-470YJ2	C R	47 Ω 1/2W J
⚠	R1793	QRZ0089-271XJ2	C R	270 Ω 1/4W J
	R1867	QRZ0074-470YJ2	C R	47Ω 1/4W J
	R1889	QRZ0074-471YJ2	C R	47Ω 1/4W J
	R1921	QRG019J-101S	OM R	100 Ω 1W J
⚠	R1924	QRZ0090-153XJ2	C R	15kΩ 2/1W J
⚠	R1926	QRZ0090-680XJ2	C R	68 Ω 1/2W J
⚠	R1927	QRD161J-332YJ2	C R	3.3kΩ 1/6W J
⚠	R1999	QRC121K-275Z	COMP. R	2.7MΩ 1/2W K
	CAPACITOR			
	C1001	QFLC1HK-103MZ	M CAP.	0.01μF 50V K
	C1003	QEM51CM-477M	E CAP.	470μF 16V M
	C1111	QEKC1HM-104GMZ	E CAP.	0.1μF 50V M
	C1201	QEN61HM-335ZJ3	BP E CAP.	3.3μF 50V M
	C1219	QFLC1HK-103MZ	M CAP.	0.01μF 50V K
	C1313	QFLC1HK-223MZ	M CAP.	0.022μF 50V K
	C1314	QFLC1HK-223MZ	M CAP.	0.022μF 50V K
	C1315	QAT3110-100A	TRIM. CAP.	10pF 100V
	C1316	QEN61HM-225ZJ3	BP E CAP.	2.2μF 50V M
	C1332	QFN31HK-102ZJ1	M CAP.	1000pF 50V K
	C1402	QFN31HK-122ZJ1	M CAP.	1200pF 50V K
	C1403	QEN61HM-105ZJ3	BP E CAP.	1μF 50V M
	C1421	QEHC1CM-107MZ	E CAP.	100μF 16V M
	C1422	QEE61VK-105BZ	TAN. CAP.	1μF 35V K
	C1423	QFLC1HK-333MZ	M CAP.	0.033μF 50V K

	SYMBOL NO.	PART NO.	PART NAME	REMARKS		
	CAPACITOR					
	C1424	QFV71HJ-564MZ	TF CAP.	0.56μF	50V	J
⚠	C1426	QEHB1VM-107M	E CAP.	100μF	35V	M
	C1428	QFLC2AK-333MZ	M CAP.	3300pF	100V	K
	C1430	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K
	C1433	QFN31HK-472ZJ1	M CAP.	4700pF	50V	K
	C1502	QEN61HM-105ZJ3	BP E CAP.	1μF	50V	M
	C1511	QFN31HK-222ZJ1	M CAP.	2200pF	50V	K
	C1512	QFN31HJ-152ZJ1	M CAP.	1500pF	50V	J
	C1513	QFLC1HJ-153MZ	M CAP.	0.015μF	50V	J
	C1514	QFLC1HJ-123MZ	M CAP.	0.012μF	50V	J
	C1521	QEN61HM-106ZJ3	BP E CAP.	10μF	50V	M
	C1522	QFLC1HK-153MZ	M CAP.	0.015μF	50V	K
⚠	C1525	QFZ0113-354S	MPP CAP.	0.35μF	200V	J
⚠	C1527	QETC1VM-107ZJ5	E CAP.	100μF	35V	M
	C1541	QFN31HK-822ZJ1	M CAP.	8200pF	50V	K
	C1542	QFN31HK-562ZJ1	M CAP.	5600pF	50V	K
⚠	C1544	QFZ0081-7001S	M P P CAP.	7000pF	1600V	±3%
⚠	C1545	QFZ0081-6201S	M P P CAP.	6200pF	1600V	±3%
	C1548	QFLC1HK-223MZ	M CAP.	0.022μF	50V	K
⚠	C1561	QETC1EM-477ZJ5	E CAP.	470μF	25V	M
⚠	C1563	QETB1VM-228J3	E CAP.	2200μF	35V	M
⚠	C1564	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K
⚠	C1565	QET62ER-106Z	E CAP.	10μF	250V	R
⚠	C1567	QEZ0099-227M	E CAP.	220μF	160V	±3%
	C1612	QEN61HM-474ZJ3	BP E CAP.	0.47μF	50V	M
	C1613	QEN61CM-106ZJ3	BP E CAP.	10μF	16V	M
	C1615	QFLC1HK-153MZ	M CAP.	0.015μF	50V	K
	C1616	QFLC1HK-153MZ	M CAP.	0.015μF	50V	K
	C1617	QFLC1HK-333MZ	M CAP.	0.033μF	50V	K
	C1618	QFLC1HK-223MZ	M CAP.	0.022μF	50V	K
	C1619	QFLC1HK-103MZ	M CAP.	0.01μF	50V	K
	C1622	QEN61HM-474ZJ3	BP E CAP.	0.47μF	50V	M
	C1623	QEN61CM-106ZJ3	BP E CAP.	10μF	16V	M
	C1624	QEN61HM-474ZJ3	BP E CAP.	0.47μF	50V	M
	C1631	QEN61CM-106ZJ3	BP E CAP.	10μF	16V	M
	C1632	QEN61CM-106ZJ3	BP E CAP.	10μF	16V	M
	C1635	QFV71HJ-224MZ	TF CAP.	0.22μF	50V	J
	C1636	QFV71HJ-563MZ	TF CAP.	0.056μF	50V	J
	C1638	QFLC1HK-153MZ	M CAP.	0.015μF	50V	K
	C1646	QFV71HJ-563MZ	TF CAP.	0.056μF	50V	J
	C1647	QFLC1HK-153MZ	M CAP.	0.015μF	50V	K
	C1663	QFN31HJ-152ZJ1	M CAP.	1500pF	50V	J
	C1664	QFN31HJ-152ZJ1	M CAP.	1500pF	50V	J
⚠	C1669	QETB1HM-108J3	E CAP.	1000μF	50V	M
	C1670	QFV71HJ-124MZ	TF CAP.	0.12μF	50V	J
	C1671	QFV71HJ-124MZ	TF CAP.	0.12μF	50V	J
	C1708	QFLC1HK-333MZ	M CAP.	0.033μF	50V	K
	C1716	CECN003-101	NET CAP.			
	C1781	QEN61HM-105ZJ3	BP E CAP.	1μF	50V	M
	C1869	QEN61CM-106ZJ3	BP E CAP.	10μF	16V	M
	C1872	QEN61CM-106ZJ3	BP E CAP.	10μF	16V	M
	C1922	QETC1VM-107ZJ5	E CAP.	100μF	35V	M
⚠	C1998	QCZ9029-103M	C CAP.	0.01μF	AC125V	M
⚠	C1999	QCZ9029-103M	C CAP.	0.01μF	AC125V	M
	TRANSFORMER					
⚠	T1541	CE41970-002	DRIVE TRANSF.			

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	COIL			
	L1401	CELP026-561ZJ3	PEAKING COIL	
⚠	L1521	CE41124-00A	LINEARITY COIL	
	L1528	CE41923-001	CORE SLEEVE	
	L1702	CELP027-220ZJ3	PEAKING COIL	
	L1831	CELP026-1R0ZJ3	PEAKING COIL	
	DIODE			
	D1001	MA4330 (L) -T2	ZENER DIODE	
	D1241	1SS133-T2	SI. DIODE	
	D1242	1SS133-T2	SI. DIODE	
	D1251	RD5. 6JS (B3) -T2	ZENER DIODE	
	D1291	1SS133-T2	SI. DIODE	
	D1292	1SS133-T2	SI. DIODE	
	D1301	1SS133-T2	SI. DIODE	
	D1302	1SS133-T2	SI. DIODE	
	D1303	1SS133-T2	SI. DIODE	
	D1304	1SS133-T2	SI. DIODE	
	D1305	1SS133-T2	SI. DIODE	
	D1306	1SS133-T2	SI. DIODE	
⚠	D1421	1SR35-100A-T2	SI. DIODE	
⚠	D1425	05AZ75-T5	ZENER DIODE	
	D1511	RD12E (B1) -T2	ZENER DIODE	
	D1512	1SS133-T2	SI. DIODE	
⚠	D1513	1N4003-T3	SI. DIODE	
	D1522	1SS133-T2	SI. DIODE	
	D1523	1SS133-T2	SI. DIODE	
⚠	D1531	1SS81-T2	SI. DIODE	
⚠	D1541	RU4DS-LFK2	SI. DIODE	
⚠	D1543	MA4068 (N) C1-T2	ZENER DIODE	
⚠	D1545	1SS81-T2	SI. DIODE	
⚠	D1547	RU3AM-LFB1	SI. DIODE	
⚠	D1548	RGP10J-T3	SI. DIODE	
⚠	D1549	RH1S-T3	SI. DIODE	
	D1550	RGP10J-T3	SI. DIODE	
	D1602	1SS133-T2	SI. DIODE	
	D1603	1SS133-T2	SI. DIODE	
	D1604	1SS133-T2	SI. DIODE	
	D1611	MA4150 (M) -T2	ZENER DIODE	
	D1612	MA4150 (M) -T2	ZENER DIODE	
	D1641	1SS133-T2	SI. DIODE	
	D1642	1SS133-T2	SI. DIODE	
	D1643	1SS133-T2	SI. DIODE	
	D1644	1SS133-T2	SI. DIODE	
	D1645	1SS133-T2	SI. DIODE	
	D1647	1SS133-T2	SI. DIODE	
	D1648	1SS133-T2	SI. DIODE	
	D1649	1SS133-T2	SI. DIODE	
	D1711	MA4051 (H) -T2	ZENER DIODE	
	D1712	1SS133-T2	SI. DIODE	
	D1713	1SS133-T2	SI. DIODE	
	D1715	GL-5HD23	L. E. D.	
	D1720	1SS133-T2	SI. DIODE	
	D1721	1SS133-T2	SI. DIODE	
	D1722	1SS133-T2	SI. DIODE	
	D1723	1SS133-T2	SI. DIODE	
	D1724	1SS133-T2	SI. DIODE	
	D1725	1SS133-T2	SI. DIODE	
	D1726	1SS133-T2	SI. DIODE	
	D1731	1SS133-T2	SI. DIODE	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
DIODE			
D1732	1SS133-T2	SI. DIODE	
D1733	1SS133-T2	SI. DIODE	
D1751	1SS133-T2	SI. DIODE	
D1752	1SS133-T2	SI. DIODE	
D1753	1SS133-T2	SI. DIODE	
D1755	1SS133-T2	SI. DIODE	
D1756	1SS133-T2	SI. DIODE	
D1757	MA4062 (H) -T2	ZENER DIODE	
D1758	1SS133-T2	SI. DIODE	
D1759	1SS133-T2	SI. DIODE	
D1760	RD6.8ES (B3) -T2	ZENER DIODE	
D1831	1SS133-T2	SI. DIODE	
D1841	1SS133-T2	SI. DIODE	
D1843	RD6.8ES (B3) -T2	ZENER DIODE	
D1861	MA4120 (M) -T2	ZENER DIODE	
D1862	RD13JS (B) -T2	ZENER DIODE	
D1863	RD6.8ES (B3) -T2	ZENER DIODE	
D1864	RD6.8ES (B3) -T2	ZENER DIODE	
D1865	RD6.8ES (B3) -T2	ZENER DIODE	
D1866	RD6.8ES (B3) -T2	ZENER DIODE	
D1867	1SS133-T2	SI. DIODE	
D1868	1SS133-T2	SI. DIODE	
D1921	1SS133-T2	SI. DIODE	
D1922	1N4003-T3	SI. DIODE	
TRANSISTOR			
Q1123	2SA933S (QR) -T	SI. TRANSISTOR	
Q1211	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1241	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1281	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1291	2SA933S (QR) -T	SI. TRANSISTOR	
Q1292	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1293	2SA673 (C) -T	SI. TRANSISTOR	
Q1423	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1501	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1502	2SA933S (QR) -T	SI. TRANSISTOR	
Q1541	2SC2655 (Y) -T	SI. TRANSISTOR	
⚠ Q1542	2SD1555-C1	POWER TRANSISTOR	H. OUT
Q1603	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1604	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1605	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1641	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1642	2SA933S (QR) -T	SI. TRANSISTOR	
Q1651	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1654	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1655	2SA933S (QR) -T	SI. TRANSISTOR	
Q1656	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1657	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1701	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1702	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1703	2SB774 (RS) -T	SI. TRANSISTOR	
Q1704	2SB774 (RS) -T	SI. TRANSISTOR	
Q1708	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1741	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1781	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1782	2SA933S (QR) -T	SI. TRANSISTOR	
Q1791	2SC2655 (Y) -T	SI. TRANSISTOR	
Q1841	2SA933S (QR) -T	SI. TRANSISTOR	
Q1842	2SC1740S (QR) -T	SI. TRANSISTOR	

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	TRANSISTOR			
	Q1861	2SC1740S (Q) -T	SI TRANSISTOR	
	Q1862	2SC1740S (QR) -T	SI. TRANSISTOR	
	Q1863	2SC2878 (B) -T	SI. TRANSISTOR	
	Q1864	2SA933S (QR) -T	SI. TRANSISTOR	
	Q1865	2SC2878 (B) -T	SI. TRANSISTOR	
	Q1866	2SC1740S (QR) -T	SI. TRANSISTOR	
	Q1867	2SC1740S (QR) -T	SI. TRANSISTOR	
	Q1921	2SC1959 (Y) -T	SI. TRANSISTOR	
	Q1922	2SA933S (QR) -T	SI. TRANSISTOR	
	X1301	CE40668-001J1	CRYSTAL	
	IC			
	IC1001	TA78L005AP-Y	I. C. (H)	
	IC1201	VC2024Z	I. C.	
	IC1202	AN7809F	I. C.	
⚠	IC1421	TA8432K	I. C.	
	IC1611	XRA15218N	I. C. (M)	
	IC1612	TDA3810	I. C.	
	IC1631	TDA1526	I. C.	
⚠	IC1661	MC13500T2	I. C.	
	IC1701	MN187201 3JXR3	IC	
	IC1702	MN1280-K	I. C. (M)	
	IC1821	LA7952	IC	
	IC1831	MN12C261D	I. C (M)	
	IC1841	GP1U721Q	IFR DETECT UNIT	
	IC1861	M51320P	I. C. (M)	
	OTHERS			
		SGX-F004A	IF MODULE PCB AS	
		SGY6001A (H2)	MTS PCB ASSY	
		CM33719-A0H-VH	ANT. TERMINAL	
		CM44462-002-H	LED SHADE	
	CF1501	CSB503F38	CER. RESONATOR	
	CF1701	CST4. 00MGW	CER. RESONATOR	
	S1401	QSL6A13-C01J2	LEVER SWITCH	V. CENTER SW
	S1701	QSP4H11-C03	PUSH SWITCH	FUNCTION
	S1702	QSP4H11-C03	PUSH SWITCH	CH DOWN
	S1703	QSP4H11-C03	PUSH SWITCH	CH UP
	S1704	QSP4H11-C03	PUSH SWITCH	POWER
	S1705	QSP4H11-C03	PUSH SWITCH	VOL UP
	S1706	QSP4H11-C03	PUSH SWITCH	VOL DOWN
	S1707	QSL6A13-C01J2	LEVER SWITCH	VSM SERVICE SW
⚠	TU1701	CEEK253-A02-M	TUNER	

CRT SOCKET PC BOARD Ass'y (SGX3008A(H2))

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	VARIABLE R			
	R3313	QVPA803-502M	V R (R CUT OFF)	5kΩ B
	R3314	QVPA803-502M	V R (G CUT OFF)	5kΩ B
	R3315	QVPA803-502M	V R (B CUT OFF)	5kΩ B
	R3319	QVPA803-201M	V R (R DRIVE)	200 Ω B
	R3320	QVPA803-201M	V R (G DRIVE)	200 Ω B
	RESISTOR			
⚠	R3305	QRG029J-123	OM R	12kΩ 2W J
⚠	R3307	QRG029J-123	OM R	12kΩ 2W J
⚠	R3309	QRG029J-123	OM R	12kΩ 2W J
⚠	R3363	QRC121K-225EZ	COMP. R	2.2MΩ 1/2W K
	CAPACITOR			
	C3361	QFH63BK-223M	MM CAP.	0.022μF 1250V K
⚠	C3363	QET52ER-105	E CAP.	1μF 250V R
	COIL			
⚠	L3307	CJ30030-110	HEATER CHOKE	
	DIODE			
	D1310	1SS133-T2	SI. DIODE	
	D1311	1SS133-T2	SI. DIODE	
	D1312	1SS133-T2	SI. DIODE	
	D3301	1SS133-T2	SI. DIODE	
	D3302	1SS133-T2	SI. DIODE	
	D3361	DFM1A4	SI. DIODE	
	TRANSISTOR			
	Q3301	2SC1740S (R) -T	SI. TRANSISTOR	
	Q3302	2SC1740S (R) -T	SI. TRANSISTOR	
	Q3303	2SC1740S (R) -T	SI. TRANSISTOR	
	Q3304	2SC3271 (NP) -C1	SI. TRANSISTOR	
	Q3305	2SC3271 (NP) -C1	SI. TRANSISTOR	
	Q3306	2SC3271 (NP) -C1	SI. TRANSISTOR	
	OTHERS			
⚠		CE41603-002	C. R. T. SOCKET	
	S3301	QSL6A13-C01J2	LEVER SWITCH	SERVICE SW

PIP SUB PC BOARD Ass'y (SGX8201A(H1))

SYMBOL NO.	PART NO.	PART NAME	REMARKS
CAPACITOR C8022	QFLC1HJ-393MZ	MYLAR CAP.	0.039μF
COIL L8021	CELP026-101Z	PEAKING COIL	
IC IC8021	TC74HC221AP	I. C (DIGI-MOS)	

PIP PC BOARD Ass'y (SGX-8001A)

SYMBOL NO.	PART NO.	PART NAME	REMARKS
VARIABLE R			
VR8001	CEVP005-224XM	CH VR (DC OFFSET)	220kΩ B
VR8002	CEVP005-222XM	CH VR	2.2kΩ B
VR8003	CEVP005-102XM	CH VR (SUB PICTUR	E CONTRAST) 1kΩ B
VR8004	CEVP005-682XM	CH VR (D/A CONVER	TER R-Y) 6.8kΩ B
VR8005	CEVP005-683XM	CH VR (DECODER CO	LOR) 68kΩ B
VR8006	CEVP005-683XM	CH VR (DECORDER T	INT) 68kΩ B
VR8007	CEVP005-102XM	CH VR (V. FILTER)	1kΩ B
CAPACITOR			
C8001	QEKB1HM-475GM	E CAP.	4.7μF 50V M
C8002	QEKB1HM-105GM	E CAP.	1μF 50V M
C8003	QEKB1HM-475GM	E CAP.	4.7μF 50V M
C8007	QEKB1HM-105GM	E CAP.	1μF 50V M
C8009	QCT81CH-271YLS	CHIP C CAP.	270pF 16V H
C8010	QCT81CH-3R0YLS	CHIP C CAP.	3.0pF 16V H
C8012	QAT3110-450A	TRIM CAP.	
C8014	QEKB1HM-225GM	E CAP.	2.2μF 50V M
C8015	QEKB1HM-474GM	E CAP.	0.47μF 50V M
C8017	QAT3210-900A	TRIM CAP.	
C8018	QCF81CZ-474YLS	CH C CAP.	0.47μF 16V Z
C8019	QCF81CZ-474YLS	CH C CAP.	0.47μF 16V Z
C8024	QEKB1HM-105GM	E CAP.	1μF 50V M
C8028	QEKB1CM-106GM	E CAP.	10μF 16V M
C8030	QEKB1CM-106GM	E CAP.	10μF 16V M
C8032	QEN51HM-335	BP E CAP.	3.3μF 50V M
C8036	QEKB1HM-105GM	E CAP.	1μF 50V M
C8037	QEKB1CM-106GM	E CAP.	10μF 16V M
C8039	QCT81CH-270YLS	CHIP C CAP.	27pF 16V H
C8042	QCT81CH-122YLS	CHIP C CAP.	1200pF 16V H
C8045	QEKB1HM-104GM	E CAP.	0.1μF 50V M
C8046	QEKB1CM-476M	E CAP.	47μF 16V M
C8049	QEKB1HM-105GM	E CAP.	1μF 50V M
C8051	QCT81CH-100YLS	CHIP C CAP.	10pF 16V H
C8052	QAT3110-450A	TRIM CAP.	
C8057	QEKB1CM-476M	E CAP.	47μF 16V M
C8062	QEKB1HM-105GM	E CAP.	1μF 50V M
C8063	QCF81CZ-474YLS	CH C CAP.	0.47μF 16V Z
C8064	QEKB1HM-105GM	E CAP.	1μF 50V M
C8065	QEKB1HM-105GM	E CAP.	1μF 50V M
C8066	QEKB1HM-105GM	E CAP.	1μF 50V M
C8067	QEKB1HM-105GM	E CAP.	1μF 50V M
C8068	QEKB1HM-105GM	E CAP.	1μF 50V M
C8069	QEKB1HM-105GM	E CAP.	1μF 50V M
C8070	QEKB1HM-105GM	E CAP.	1μF 50V M
C8071	QEKB1CM-106GM	E CAP.	10μF 16V M
C8073	QEKB1CM-476M	E CAP.	47μF 16V M
C8077	QEKB1CM-476M	E CAP.	47μF 16V M
C8079	QAT3110-450A	TRIM CAP.	
C8080	QCT81CH-470YLS	CHIP C CAP.	47pF 16V H
C8081	QEKB1CM-476M	E CAP.	47μF 16V M
C8083	QEKB1CM-106GM	E CAP.	10μF 16V M
C8085	QEKB1HM-105GM	E CAP.	1μF 50V M
C8086	QEKB1CM-106GM	E CAP.	10μF 16V M
C8088	QEKB1CM-106GM	E CAP.	10μF 16V M
C8090	QEKB1HM-105GM	E CAP.	1μF 50V M
C8091	QEKB1HM-105GM	E CAP.	1μF 50V M
C8092	QEKB1HM-105GM	E CAP.	1μF 50V M
C8093	QEKB1HM-105GM	E CAP.	1μF 50V M
C8094	QEKB1CM-106GM	E CAP.	10μF 16V M

SYMBOL NO.	PART NO.	PART NAME	REMARKS
CAPACITOR			
C8097	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8098	QCT81CH-470YLS	CHIP C CAP.	47pF 16V H
C8099	QCT81CH-470YLS	CHIP C CAP.	47pF 16V H
C8100	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8101	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8102	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8103	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8104	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8105	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8106	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8107	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8111	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8112	QEKB1CM-106GM	E CAP.	10μF 16V M
C8122	QCT81CH-390YLS	CHIP C CAP.	39pF 16V H
C8129	QEKB1CM-476M	E CAP.	47μF 16V M
C8130	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8131	QCT81CH-101YLS	CHIP C CAP.	100pF 16V H
C8205	QCT81CH-200YLS	CHIP C CAP.	20pF 16V H
C8504	QCT81CH-221YLS	CHIP C CAP.	220pF 16V H
C8505	QCT81CH-331YLS	CHIP C CAP.	330pF 16V H
C8514	QEKB1HM-105GM	E CAP.	1μF 50V M
C8515	QEKB1CM-336M	E CAP.	33μF 16V M
C8516	QEKB1HM-105GM	E CAP.	1μF 50V M
C8517	QEPB1HM-105GM	BP E CAP.	1μF 50V M
C8518	QEKB1HM-224GM	E CAP.	0.22μF 50V M
C8519	QEKB1CM-106GM	E CAP.	10μF 16V M
C8520	QEKB1CM-106GM	E CAP.	10μF 16V M
C8521	QEN51HM-475	BP E CAP.	4.7μF 50V M
C8524	QCT81CH-680YLS	CHIP C CAP.	68pF 16V H
C8525	QEKB1CM-106GM	E CAP.	10μF 16V M
C8602	QCT81CH-150YLS	CHIP C CAP.	15pF 16V H
C8603	QCT81CH-560YLS	CHIP C CAP.	56pF 16V H
TRANSFORMER			
T8000	CE42093-001	OSC. TRANSF.	
COIL			
L8002	CELP029-390	PEAKING COIL	
L8003	CELP026-101	PEAKING COIL	
L8004	CELP026-101	PEAKING COIL	
L8005	CELP026-101	PEAKING COIL	
L8006	CELP026-101	PEAKING COIL	
L8007	CELP026-101	PEAKING COIL	
L8008	CELP026-101	PEAKING COIL	
L8009	CELP026-101	PEAKING COIL	
L8012	CELP026-101	PEAKING COIL	
L8013	CELP026-101	PEAKING COIL	
L8014	CELP026-101	PEAKING COIL	
L8016	CELP026-101	PEAKING COIL	
L8017	CELP029-470	PEAKING COIL	
L8018	CELP029-680	PEAKING COIL	
L8019	CELP026-101	PEAKING COIL	
L8020	CELP026-101	PEAKING COIL	
L8021	CELP026-101	PEAKING COIL	
DIODE			
D8003	MA151K-W	DIODE	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
TRANSISTOR			
Q8001	2SA933S (QR) -T	SI. TRANSISTOR	
Q8002	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8003	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8004	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8005	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8006	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8007	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8009	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8010	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8011	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8012	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8013	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8014	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8015	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8016	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8017	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8018	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8019	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8020	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8021	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8022	2SA1022 (BC) -W	SI. TRANSISTOR	
Q8023	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8024	2SC2778 (BC) -W	SI. TRANSISTOR	
Q8025	2SA1022 (BC) -W	SI. TRANSISTOR	
X8001	CSB500F9	CER. RESONATOR	
X8002	CE40405-001	CRYSTAL (4FSC)	
X8003	CSB500F9	CER. RESONATOR	
X8004	CE40405-001	CRYSTAL (4FSC)	
X8006	CSB500F9	CER. RESONATOR	
IC			
IC8001	M51285BFP	I. C.	
IC8002	M52684AFP-W	I. C.	
IC8003	M51271FP-W	I. C.	
IC8004	M52682FP-W	IC	
IC8005	M52686AFP-W	IC	
IC8006	M5M4C500L-10	I. C (D-RAM)	
IC8007	M50541FP	PIP CONTROLLER	
IC8008	M74HC02FP-W	IC	
IC8009	M74HC02FP-W	IC	
IC8010	MC74HC4053F-W	I. C.	
IC8011	M51497L	IC	
IC8012	SN74HC157NS-W	I. C.	
IC8013	MC74HC4053F-W	I. C.	
IC8014	CXL5504M-W	I. C.	
OTHERS			
EF8001	CE41865-101Y	EMI FILTER	
EF8002	CE41865-101Y	EMI FILTER	
EF8003	CE41865-101Y	EMI FILTER	
EF8004	CE41865-101Y	EMI FILTER	
EF8005	CE41865-101Y	EMI FILTER	
EF8006	CE41865-222Y	EMI FILTER	
EF8007	CE41865-222Y	EMI FILTER	
EF8008	CE41865-222Y	EMI FILTER	
EF8009	CE41865-222Y	EMI FILTER	
EF8010	CE41865-222Y	EMI FILTER	
EF8011	CE41865-222Y	EMI FILTER	
EF8012	CE41865-222Y	EMI FILTER	
EF8013	CE41865-222Y	EMI FILTER	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
OTHERS			
EF8016	CE41865-101Y	EMI FILTER	
EF8017	CE41865-101Y	EMI FILTER	
EF8018	CE41865-101Y	EMI FILTER	
EF8019	CE41865-101Y	EMI FILTER	
EF8020	CE41865-101Y	EMI FILTER	
EF8021	CE41865-101Y	EMI FILTER	
EF8022	CE41865-101Y	EMI FILTER	
EF8023	CE41865-101Y	EMI FILTER	
EF8024	CE41865-101Y	EMI FILTER	
EF8025	CE41865-223Y	EMI FILTER	
EF8026	CE41865-223Y	EMI FILTER	
EF8027	CE41865-223Y	EMI FILTER	
EF8030	CE41865-223Y	EMI FILTER	
FB8001	CE41433-001	BEADS CORE	
F8002	CE42094-001	LPF	
F8003	CE42091-001	LPF	
F8004	CE42092-001	BPF	
F8005	CE42121-001	LPF	
F8006	CE42121-001	LPF	
F8007	CE41921-001	DELAY LINE	

MTS PC BOARD Ass'y (SGY6001A(H2))

This pc boards are supplied as assemblies.

The component parts only the PC boards are available only when the parts are listed in the " PRINTED CIRCUIT BOARD PARTS LIST".

SYMBOL NO.	PART NO.	PART NAME	REMARKS		
RESISTOR					
R6603	QRV141F-4302AY	MF R	43kΩ	1/4W	F
R6608	QRV141F-6201AY	MF R	6.2kΩ	1/4W	F
R6609	QRV141F-3901AY	MF R	3.9kΩ	1/4W	F
R6610	QRV141F-4702AY	MF R	47kΩ	1/4W	F
R6611	QRV141F-4702AY	MF R	47kΩ	1/4W	F
CAPACITOR					
C6601	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6602	QFLC1HK-123MZ	M CAP.	0.012μF	50V	K
C6603	QFN31HK-562ZJ1	M CAP.	5600pF	50V	K
C6604	QEP61HM-474GMZ	BP E CAP.	0.47μF	50V	M
C6605	QEKC1CM-476MZ	E CAP.	47μF	16V	M
C6607	QFN31HK-272ZJ1	M CAP.	2700pF	50V	K
C6608	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6609	QEE61CK-106BZ	TAN. CAP.	10μF	16V	K
C6610	QEE61CK-335BZ	TAN. CAP.	3.3μF	16V	K
C6611	QEKC1HM-105GMZ	E CAP.	1μF	50V	M
C6612	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6613	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6614	QFLC1HK-473MZ	M CAP.	0.047μF	50V	K
C6615	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6616	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6617	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
C6618	QEKC1HM-475GMZ	E CAP.	4.7μF	50V	M
TRANSISTOR					
Q6601	2SC2785 (JH) -T	SI. TRANSISTOR			
Q6602	2SC2785 (JH) -T	SI. TRANSISTOR			
Q6603	2SC2785 (JH) -T	SI. TRANSISTOR			
IC					
IC6601	CXA1124AS	I. C.			

PIP INTERFACE PC BOARD Ass'y (SGX8102A(H2))

SYMBOL NO.	PART NO.	PART NAME	REMARKS
VARIABLE R			
R8273	QVPA601-471J5	V R (COMB FILTER)	470 Ω B
CAPACITOR			
C8252	QFV71HJ-104MZ	TF CAP.	0.1μF 50V J
C8253	QFLC1HK-103MZ	M CAP.	0.01μF 50V K
C8258	QFLC1HK-103MZ	M CAP.	0.01μF 50V K
C8277	QFN31HK-472ZJ1	M CAP.	4700pF 50V K
TRANSFORMER			
T8271	CE40176-001	DL P. TRANSF.	
COIL			
L8201	CELP026-820ZJ3	PEAKING COIL	
L8202	CELP026-470ZJ3	PEAKING COIL	
L8271	CELP026-220ZJ3	PEAKING COIL	
L8272	CELP027-180ZJ3	PEAKING COIL	
L8273	CELP026-820ZJ3	PEAKING COIL	
L8274	CELP026-100ZJ3	PEAKING COIL	
DIODE			
D8201	1SS133-T2	SI. DIODE	
D8202	1SS133-T2	SI. DIODE	
D8203	1SS133-T2	SI. DIODE	
D8204	1SS133-T2	SI. DIODE	
D8253	RD13JS (B) -T2	ZENER DIODE	
D8254	RD13JS (B) -T2	ZENER DIODE	
D8255	MA4130 (M) -T2	ZENER DIODE	
D8256	1SS133-T2	SI. DIODE	
TRANSISTOR			
Q8201	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8202	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8203	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8204	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8205	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8206	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8212	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8250	2SA933S (QR) -T	SI. TRANSISTOR	
Q8251	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8252	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8261	2SC1740S (QR) -T	SI. TRANSISTOR	
Q8262	2SC1740S (QR) -T	SI. TRANSISTOR	
IC			
IC8221	NJM2245L	I. C.	
IC8251	M52005P	I. C. (M)	
IC8901	UPC2405HF	I. C.	
OTHERS			
DL8271	CE41577-002	DELAY LINE	

POWER PC BOARD Ass'y (SGX9009A(H2))

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	RESISTOR			
⚠	R9901	QRF074K-1R8J5	UNF R	1.8 Ω 7W K
⚠	R9904	QRZ0090-103XJ2	C R	10KΩ 1/2W J
⚠	R9905	QRF154J-331J5	UNF R	330 Ω 1 5W J
	R9906	QRZ0089-224XJ2	C R	220KΩ 1/4W J
⚠	R9907	QRF054K-4R7J5	UNF R	4.7 Ω 5W K
	R9908	QRZ0089-391XJ2	C R	390Ω 1/4W J
⚠	R9909	QRF154J-331J5	UNF R	330 Ω 1 5W J
	R9963	QRZ0089-222XJ2	C R	2.2KΩ 1/4W J
	CAPACITOR			
⚠	C9901	QCZ9034-472A	C CAP.	4700pFAC125V P
⚠	C9902	QCZ9034-472A	C CAP.	4700pFAC125V P
⚠	C9903	QCZ9034-472A	C CAP.	4700pFAC125V P
⚠	C9904	QEZ0145-567R	E CAP.	560μF 200V M
	C9905	QEH62CM-106MZ	E CAP.	10μF 160V M
⚠	C9907	QFZ9022-104M	M F CAP.	0.1μFAC250V M
⚠	C9908	QFZ9022-104M	M F CAP.	0.1μFAC125V M
⚠	C9961	QCF31HP-103ZJ5	CH C CAP.	0.01μF 50V P
⚠	C9962	QCF31HP-103ZJ5	CH C CAP.	0.01μF 50V P
⚠	C9963	QCF31HP-103ZJ5	CH C CAP.	0.01μF 50V P
⚠	C9964	QCF31HP-103ZJ5	CH C CAP.	0.01μF 50V P
⚠	C9965	QETB1VM-338J5	E CAP.	3300μF 35V M
⚠	C9973	QETB1EM-108J3	E CAP.	1000μF 25V M
	DIODE			
⚠	D9901	1S1887A-LC7	SI. DIODE	
⚠	D9902	1S1887A-LC7	SI. DIODE	
⚠	D9903	1S1887A-LC7	SI. DIODE	
⚠	D9904	1S1887A-LC7	SI. DIODE	
⚠	D9905	1S1887A-T3	SI. DIODE	
⚠	D9961	S2VB10-F05	BRIDGE DIODE	
	D9962	1SS133-T2	SI. DIODE	
	D9963	RD18E (B1) -T2	SI DIODE	
⚠	D9964	1SS133-T2	SI. DIODE	
	D9965	S1WB (A) 10	SI. DIODE	
	TRANSISTOR			
⚠	Q9961	2SA1015 (YG) -T	SI. TRANSISTOR	
⚠	Q9962	2SD1266A (QP)	SI. TRANSISTOR	
⚠	Q9963	2SC1815 (YG) -T	SI. TRANSISTOR	
	IC			
⚠	IC9901	STR30130	I. C. (H)	
	OTHERS			
⚠	F9901	QMF66U1-5R0S	FUSE	5A
⚠	F9902	QMF53U1-1R25S	FUSE	1.25A
⚠	F9961	QMF53U1-2R5S	FUSE	2.5A
⚠	LF9901	CE40247-00A	LINE FILTER	
⚠	RY9901	CESK002-001	RELAY	
⚠	TH9901	CEKP001-001J1	P. THERMISTOR	

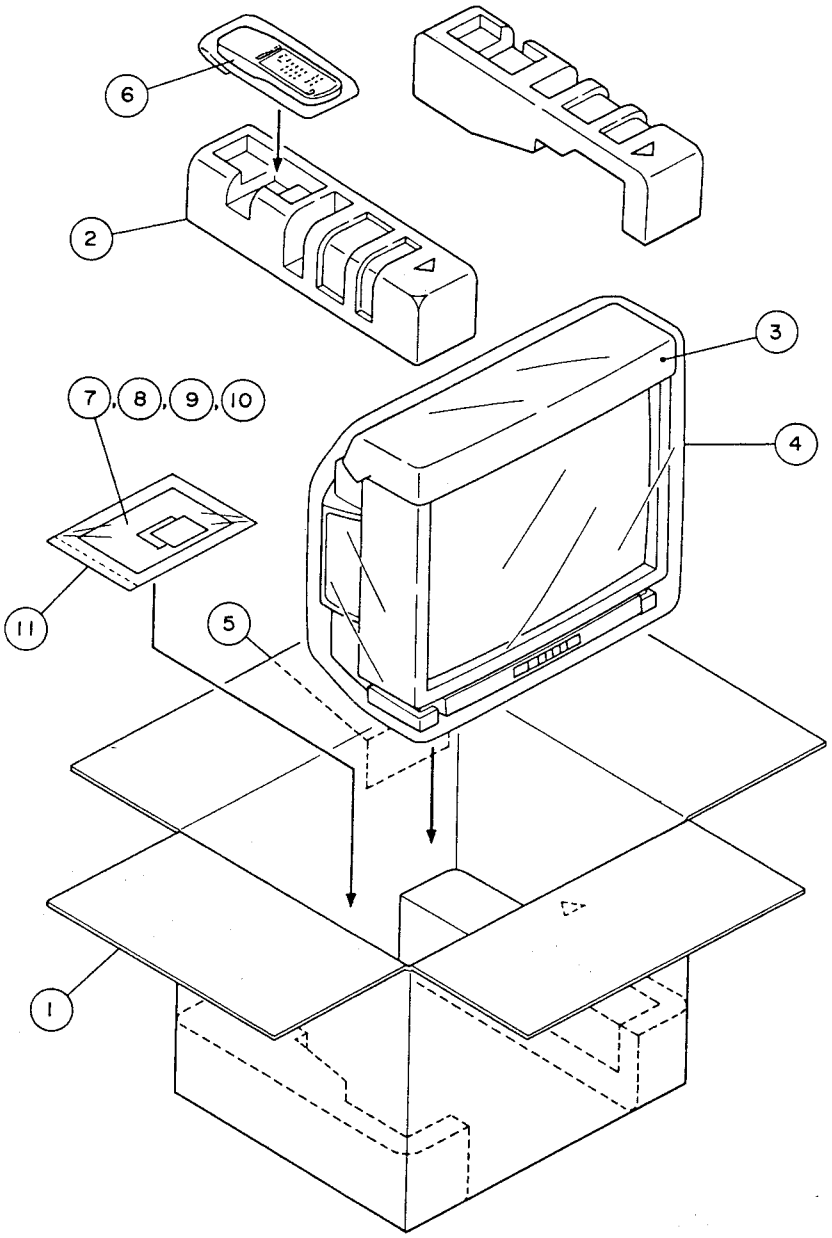
MODULE PC BOARD PARTS LIST

The following module pc boards are supplied as assemblies.

The component parts only the module PC boards are available only when the parts are listed in the "MODULE PRINTED CIRCUIT BOARD PARTS LIST".

IF MODULE PC BOARD ASS'Y (SGX-F004A) within MAIN PC BOARD ASS'Y

PACKING



PACKING PARTS LIST

SYMBOL NO.	PART NO.	PART NAME	REMARKS	
1	CP10972-033-A	PACKING CASE		*
2	CP10819-A0A-A	PACKING CUSHION	4pcs in 1set	*
3	CP30055-002-A	TOP COVER		*
4	CP30056-002-A	POLY BAG		*
5	CM20926-00A-A	REC. KEEP. CARD		*
6	RM-C687-KD-H1	RC HAND PIECE		*
7	CM21229-B01	SAFETY TIPS		
8	BT-20108A	SERVICE INF CARD		
9	BT-20113A	WARRANTY CARD		
10	AV2771S-US-IBA	INST. BOOK		
11	CM30751-010	POLY BAG		

JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.

East Coast Region	: 107 Little Falls Road, Fairfield, New Jersey 07006	(201)808-9279
Mid West Region	: 2250 Lively Blvd., Elk Grove, Illinois 60007	(708)364-0880
South West Region	: 407 Garden Oaks Blvd., Houston, Texas 77018	(713)694-3331
West Coast Region	: 5665 Corporate Avenue, Cypress, California 90630	(714)229-8011
South East Region	: 1500 Lakes Parkway, Lawrenceville, Georgia 30243	(404)339-2522
Hawaii	: 2969 Mapunapuna Place, Honolulu, Hawaii 96819	(808)833-5828

JVC

Service & Engineering Company of America
Corporate Office
107 Little Falls Road
FairField, New Jersey 07006
201-808-2100

AV2771SU-USH

Printed in Jap
9107 VP
T.N / M.H / A.N

AV-2771S(US) STANDARD CIRCUIT DIAGRAM

■NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal :Color bar signal
(2)Setting positions of each knob/button and variable resistor :Original setting position when shipped
(3)Internal resistance of tester :DC 20kΩ/V
(4)Oscilloscope sweeping time :H ⇒20μS/div
:V ⇒5mS/div
:Others ⇒ Sweeping time is specified
(5)Voltage values :All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL[EXAMPLE]

•In the P.C.board :R1209→R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

•Resistance value
No unit :[Ω]
K :[KΩ]
M :[MΩ]

•Rated allowable power
No indication :1/6[W]
Others :As specified

•Type
No indication :Carbon resistor
OMR :Oxide metal film resistor
MFR :Metal film resistor
MPR :Metal plate resistor
UNFR :Uninflammable resistor
FR :Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

•Capacitance value
1or higher :[pF]
less than 1 :[μF]

•Withstand voltage
No indication :DC50[V]
Others :DC withstand voltage[V]
AC indicated :AC withstand voltage[V]

*Electrolytic Capacitors
47/50[Example]:Capacitance value[μF]/withstand voltage[V]

•Type
No indication :Ceramic capacitor
MY :Mylar capacitor
MM :Metalized mylar capacitor
PP :Polypropylene capacitor
MPP :Metalized polypropylene capacitor
MF :Metalized film capacitor
TF :Thin film capacitor
BP :Bipolar electrolytic capacitor
TAN :Tantalum capacitor

(3)Coils

No unit :[μH]
Others :As specified

(4)Power Supply

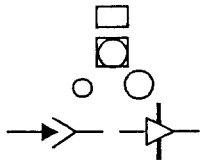

:B1(129.3V)
:B2(12V)
:9V
:5V

* Respectively voltage values are indicated.

(5)Test Point


: Test point
: Only test point display

(6)Connecting method


: Connector
: Board in connector
: Wrapping or soldering
: Receptacle

(7)Ground symbol


: LIVE side ground
: NEUTRAL side ground
: EARTH ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE (primary : ⊥) side GND and the NEUTRAL (secondary : ⏚) side GND. Therefore, care must be taken for the following points.

(1) Do not touch the LIVE side GND or the LIVE side GND and the NEUTRAL side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2) Do not short between the LIVE side GND and NEUTRAL side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and NEUTRAL side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

Jul. 1991 No.50577

SEMICONDUCTOR SHAPES

TRANSISTORS

2SC2785(JH)-T
2SA933S(QR)-T
2SC1740S(QR)-T
2SC1740S(R)-T
2SC1740S(Q)-T

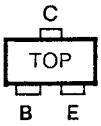
2SA673(C)-T
2SB774(RS)-T
2SC1959(Y)-T
2SC1815(YG)-T
2SA1015(YG)-T
2SC2878(B)-T

2SC2655(Y)-T

2SD1266A(QP)

2SC3271(NP)-C1

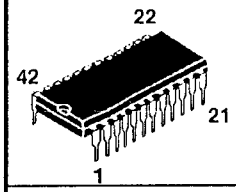
2SD1555-C1



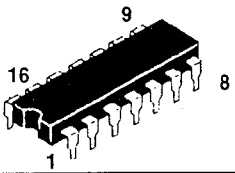
2SA1022(BC)-W
2SC2778(BC)-W

ICs

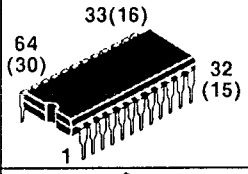
CXA1124AS



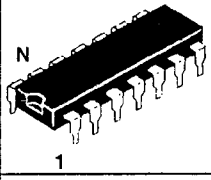
MN12C261D

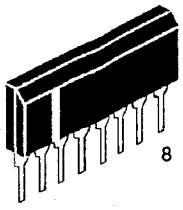


MN1872013JX3
VC2024Z

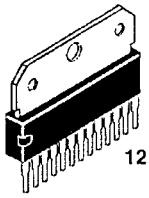


M51320P
M52005P
TDA3810
TDA1526

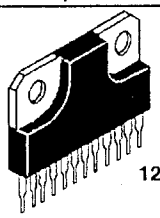




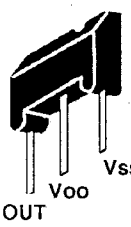
M51497L



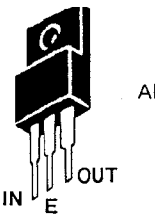
TA8432K



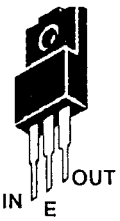
MC13500T2



MN1280-K

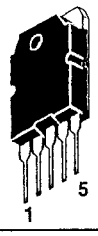


AN7809F

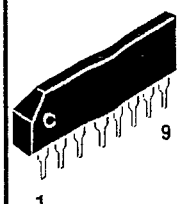


UPC2405HF

TA78L005AP-Y

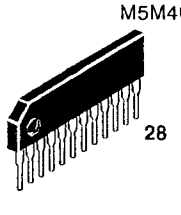


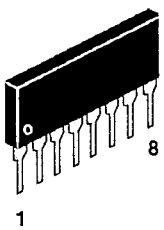
STR30130



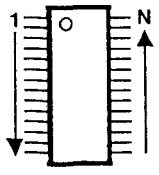
LA7952

M5M4C500L-10

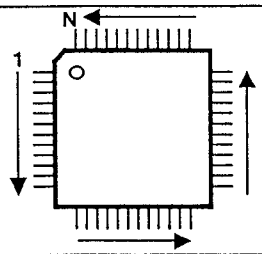




XRA15218N
NJM2245L



M51271FP-W
MC74HC4053F-W
CXL5504M-W
M52684AFP-W
SN74HC157NS-W
M74HC02FP-W
M52686AFP-W



M50541FP
M51285BFP

CHANNNEL CHART

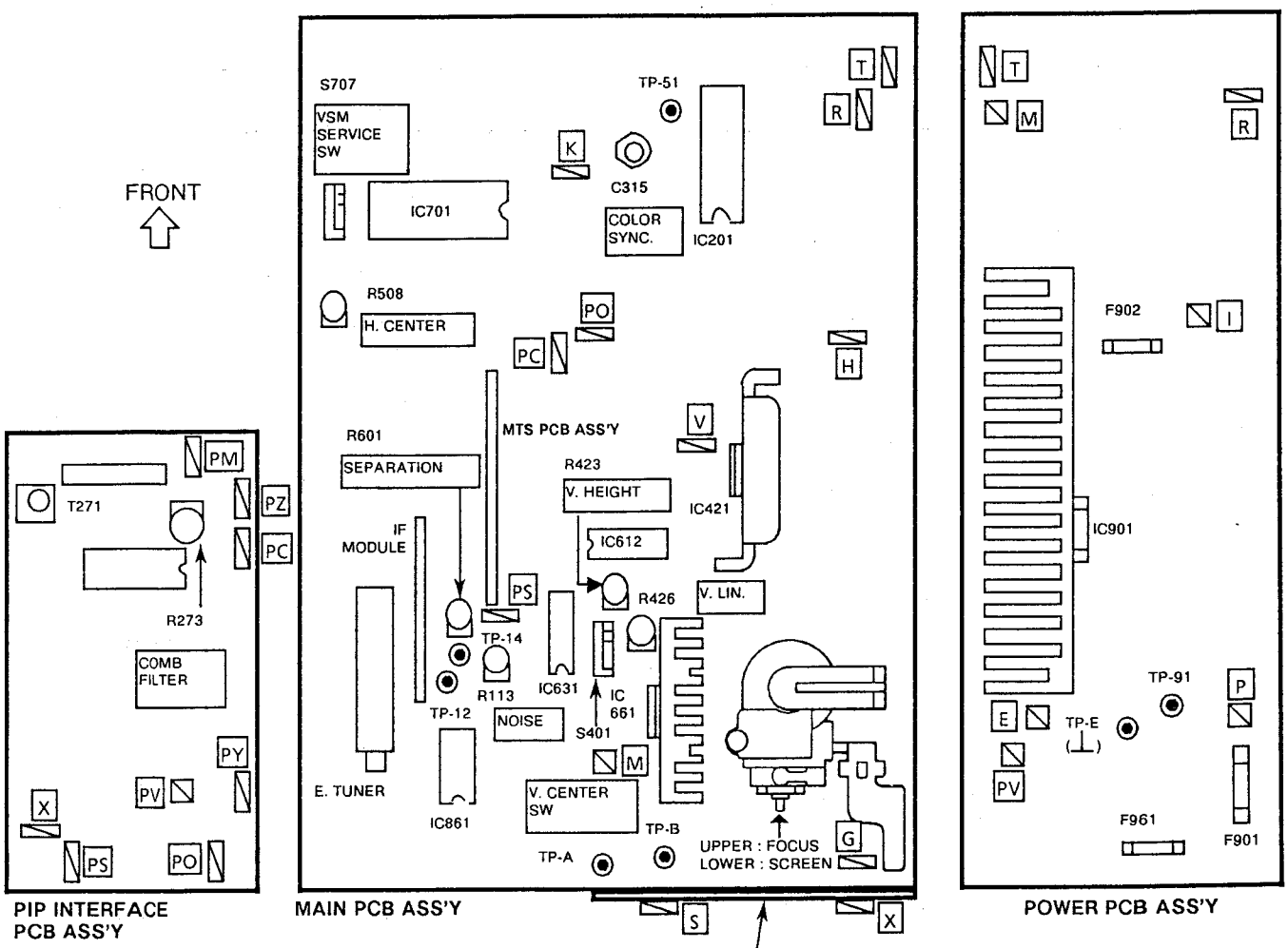
MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
○	○	VL	02 03 04 05 06		I
		VH	07 08 09 10 11 12 13		II
×	○	MID	A	14	I
			B	15	
			C	16	II
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
		HYPER	W + 1	37	
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
			W + 12	48	IV
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
		ULTRA	W + 29	65	
			W + 30	66	
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	
			W + 35	71	

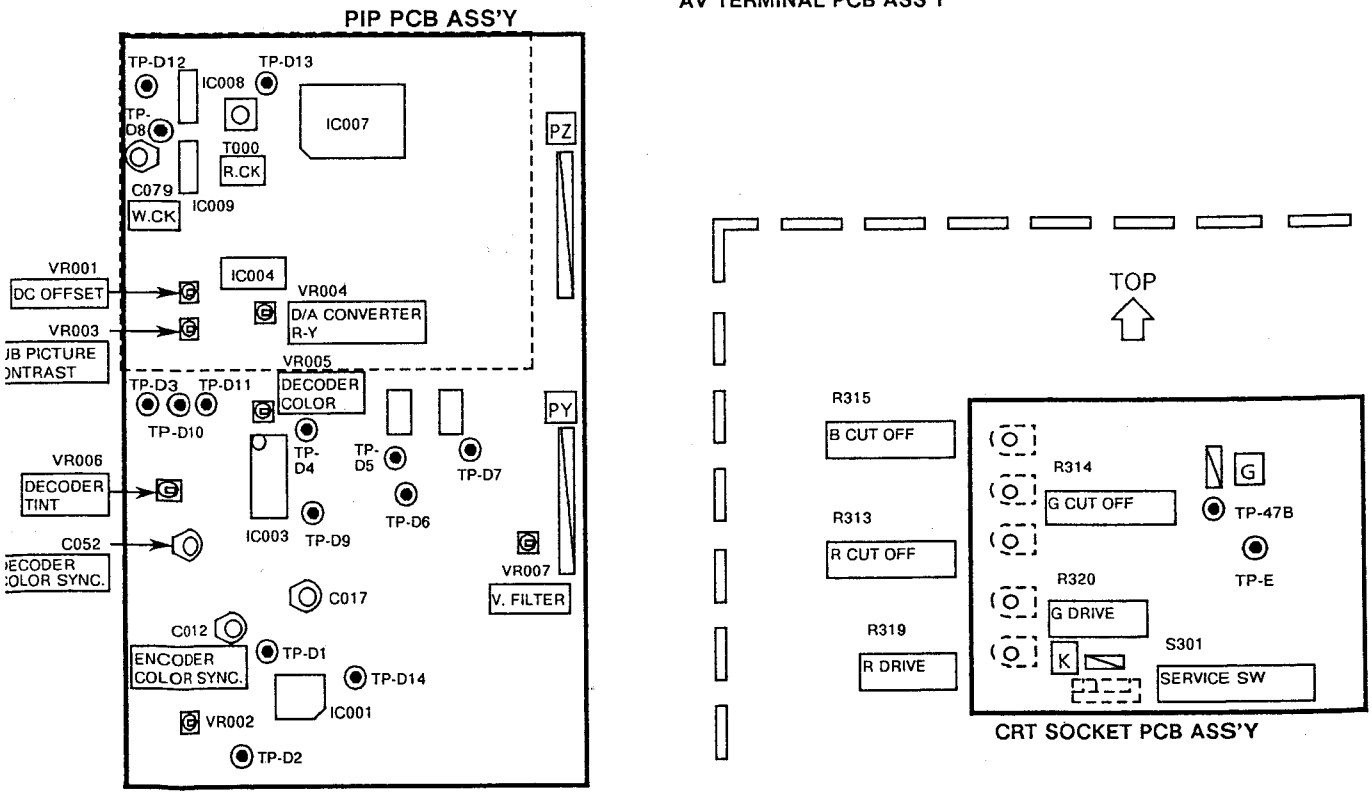
MODE		BAND	CHANNEL		TUNER BAND
TV	CATV		REAL	DISP.	
×	○	ULTRA	W + 35	71	IV
			W + 36	72	
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
			W + 59	100	
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14 ~ 69		IV

TOTAL 180CH
{ VHF 124CH
{ UHF 56CH

NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIED.

MAINPARTS LOCATION AND ALIGNMENTS LOCATION



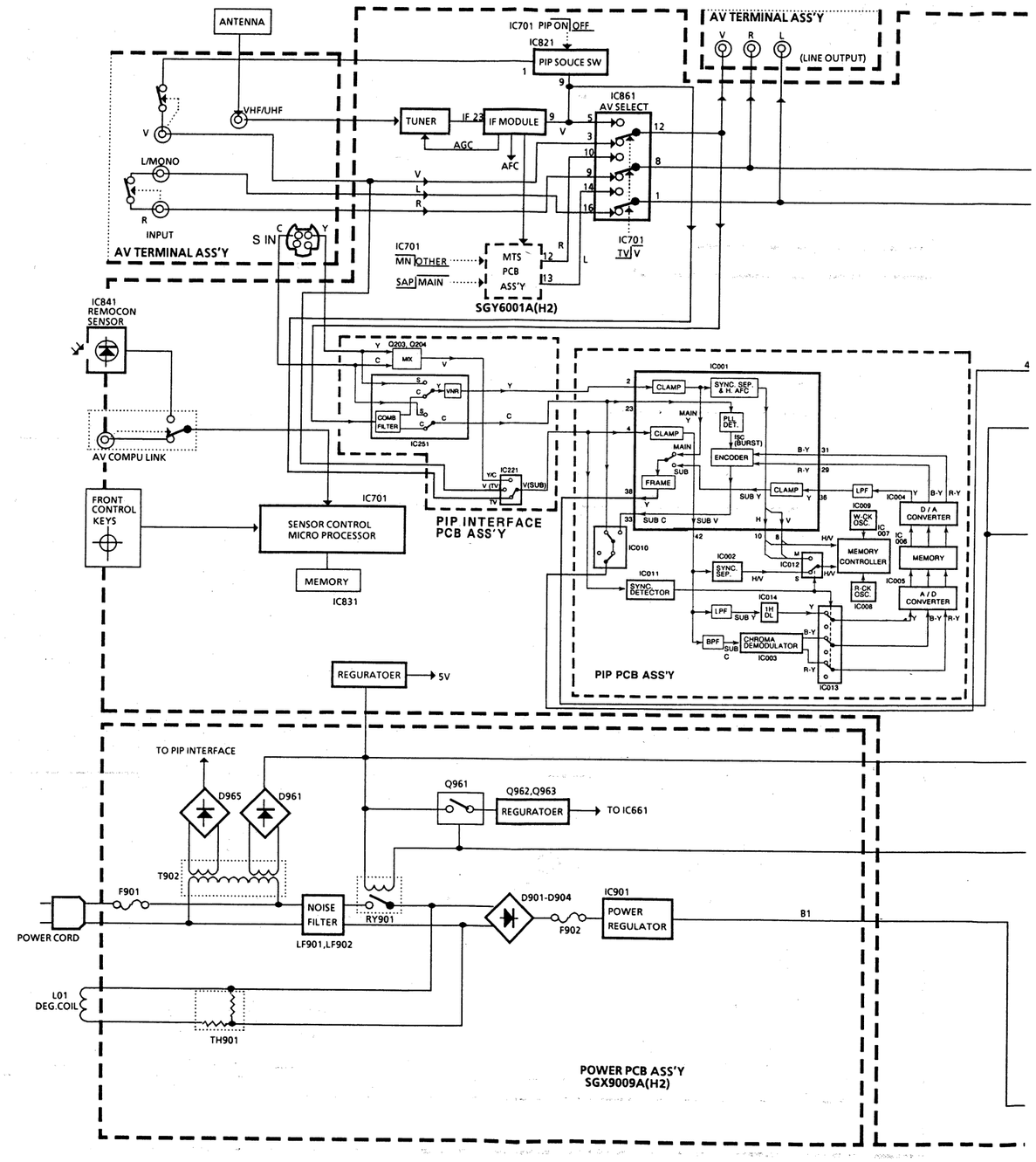


WIRING LIST

P.C.B. or PART NAME	CONNECTOR NAME	WIRE	CONNECTOR NAME	P.C.B. or PART NAME
MAIN PCB ASS'Y [SGX1011A(H2)]	G	⟷	G	CRT SOCKET PCB ASS'Y [SGX3008A(H2)]
MAIN PCB ASS'Y [SGX1011A(H2)]	H	⟷	WIRE	DEF.YOKE
MAIN PCB ASS'Y [SGX1011A(H2)]	K	⟷	K	CRT SOCKET PCB ASS'Y [SGX3008A(H2)]
MAIN PCB ASS'Y [SGY1011A(H2)]	M	⟷	M	POWER PCB ASS'Y [SGX9009A(H2)]
MAIN PCB ASS'Y [SGX1011A(H2)]	R	⟷	R	POWER PCB ASS'Y [SGX9009A(H2)]
MAIN PCB ASS'Y [SGX1011A(H2)]	T	⟷	T	DEG.COIL
MAIN PCB ASS'Y [SGX1011A(H2)]	V	⟷	WIRE	DEF.YOKE
MAIN PCB ASS'Y [SGX1011A(H2)]	PC	⟷	PC	PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]
MAIN PCB ASS'Y [SGX1011A(H2)]	PM	⟷	PM	PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]
MAIN PCB ASS'Y [SGX1011A(H2)]	PO	⟷	PO	PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]
MAIN PCB ASS'Y [SGX1011A(H2)]	PS	⟷	PS	PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]
PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]	PV	⟷	PV	POWER PCB ASS'Y [SGX9009A(H2)]
PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]	PY	⟷	PY	PIP PCB ASS'Y [SGX-8001A]
PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]	PZ	⟷	PZ	PIP PCB ASS'Y [SGX-8001A]
POWER PCB ASS'Y [SGX9009A(H2)]	E	⟷	WIRE	MAIN PCB ASS'Y [SGX1011A(H2)]
POWER PCB ASS'Y [SGX9009A(H2)]	I	⟷	WIRE	DEG.COIL
MAIN PCB ASS'Y [SGX1011A(H2)]	P	⟷		POWER CORD
AV TERMINAL PCB ASS'Y	S	⟷	+, -	SPERKER
AV TERMINAL PCB ASS'Y	X	⟷	X	PIP INTERFACE PCB ASS'Y [SGX8102A(H2)]

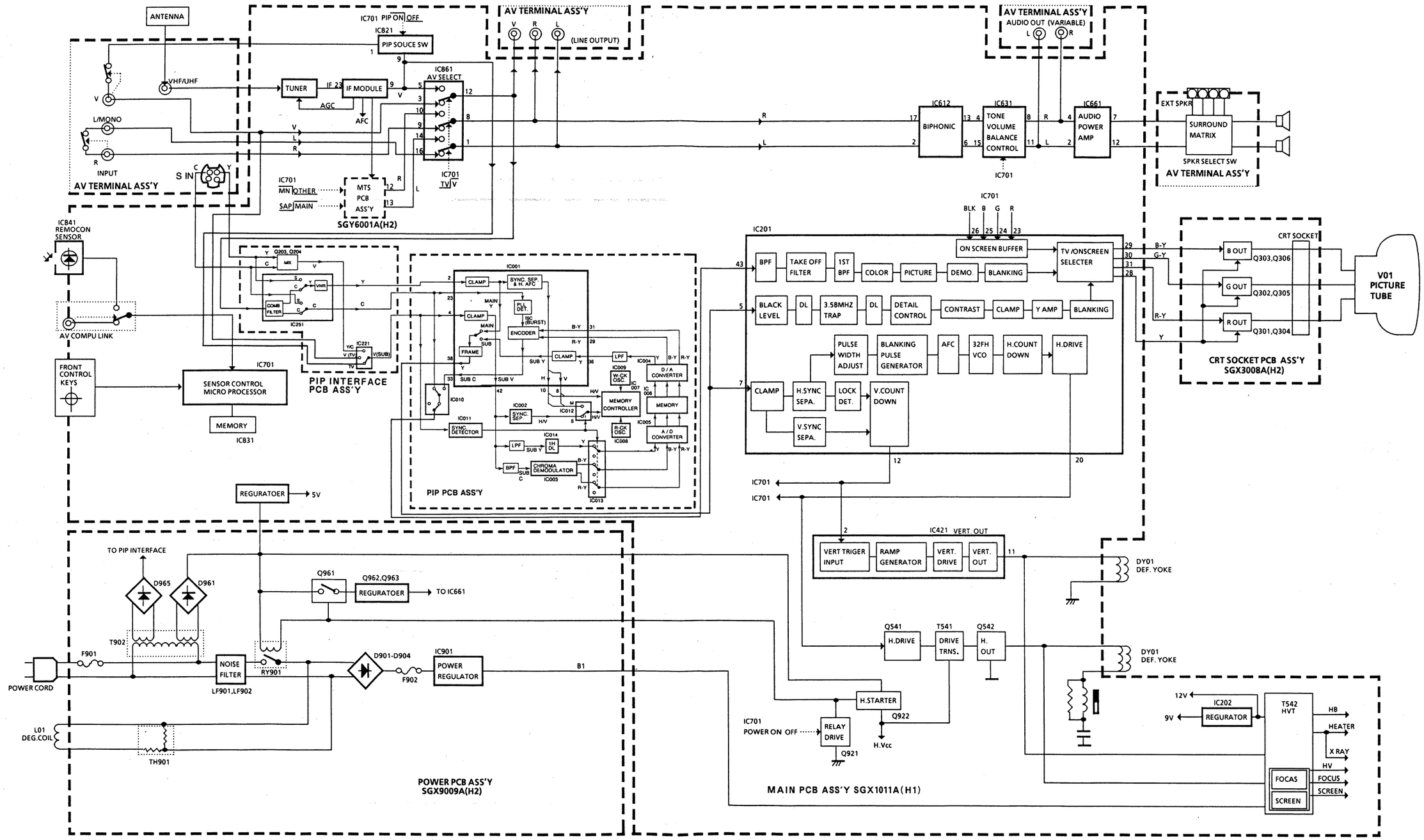
●NOTE:Refer to Main Parts and Alignment Locations (Page 2-4) for detailed connector positions.

BLOCK DIAGRAM



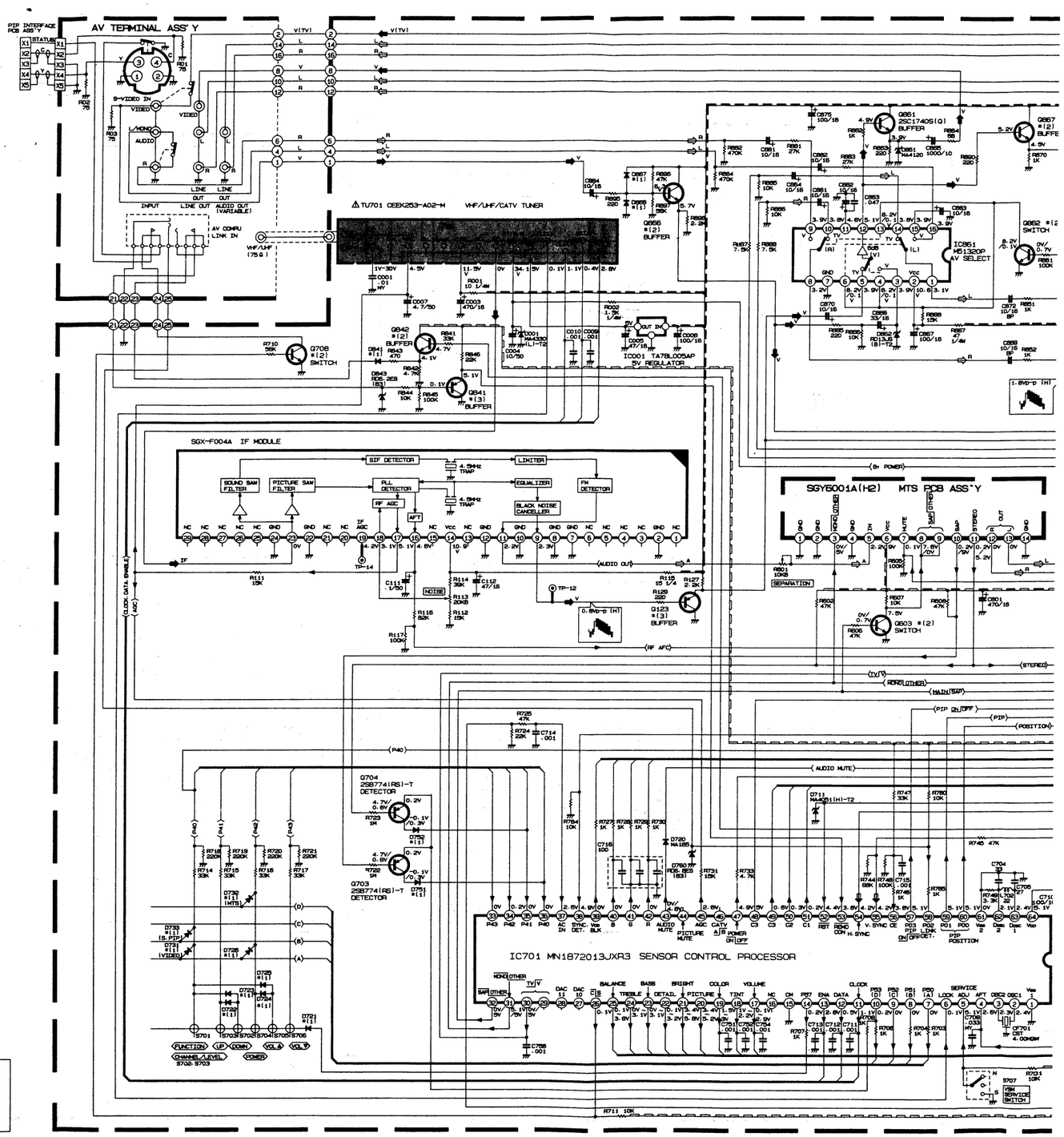
AV-2771S

BLOCK DIAGRAM



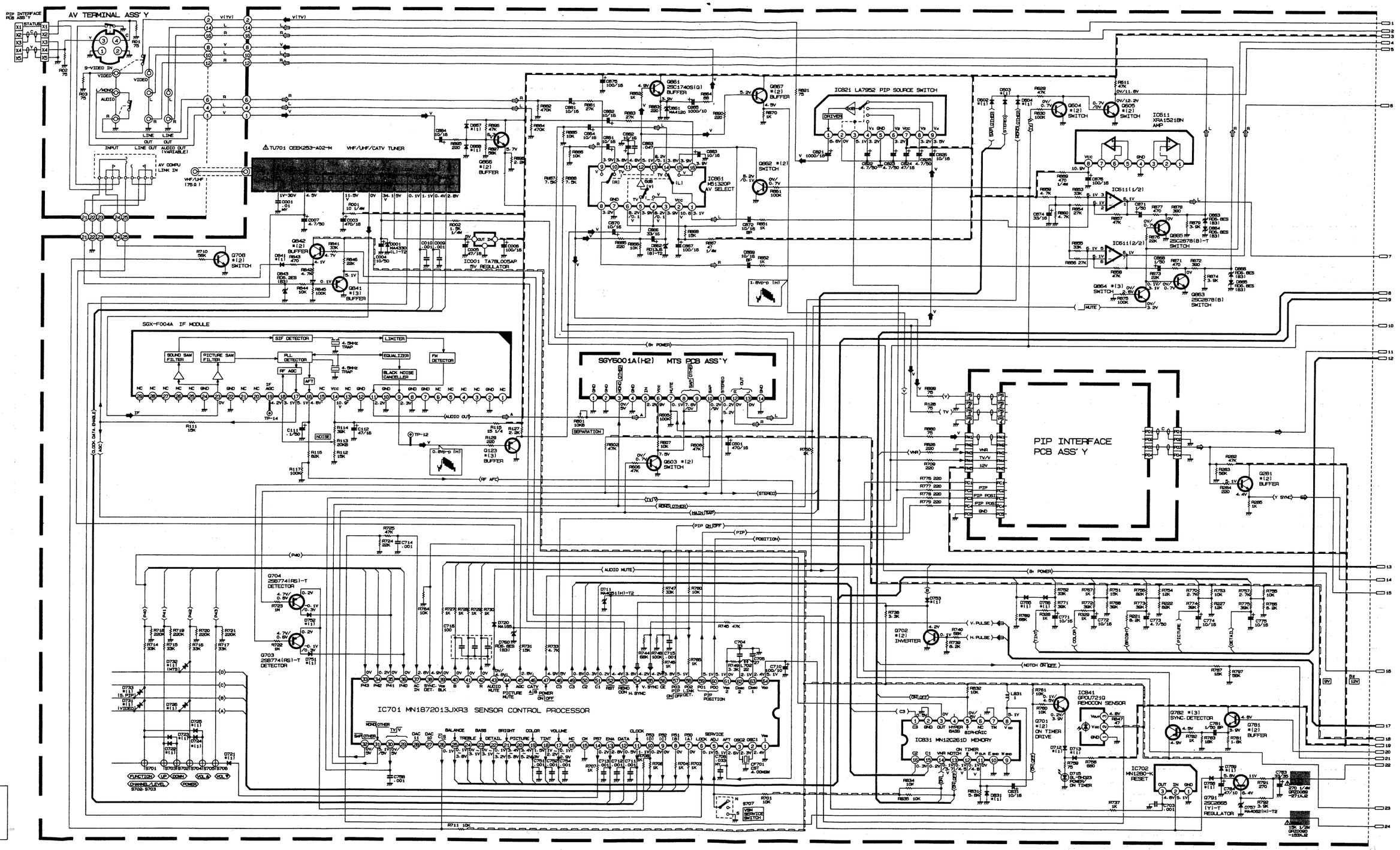
CIRCUIT DIAGRAMS AND PCB PATTERNS

MAIN PCB,CRT SOCKET PCB,AV TERMINAL CIRCUIT DIAGRAMS

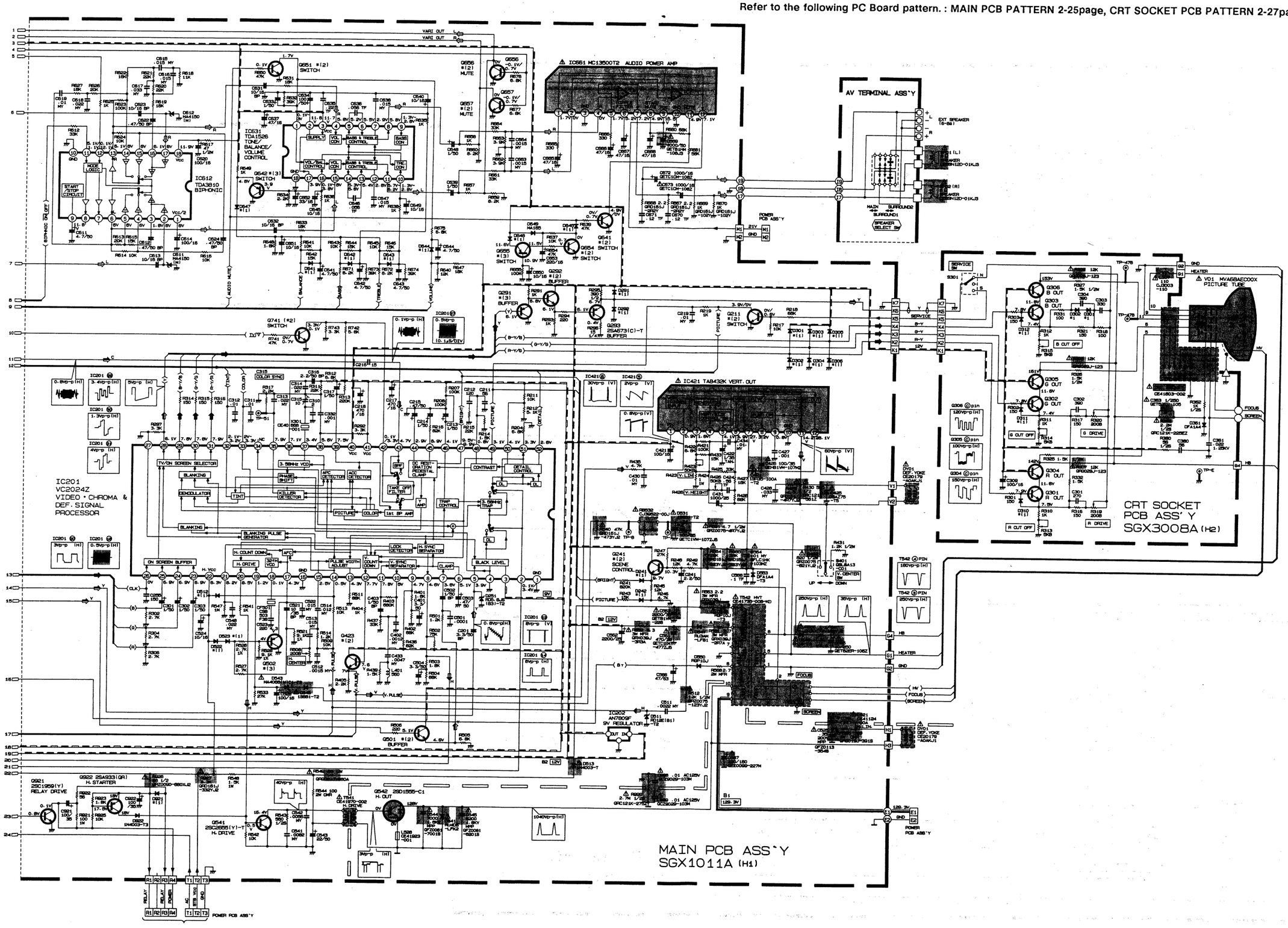


NOTICE

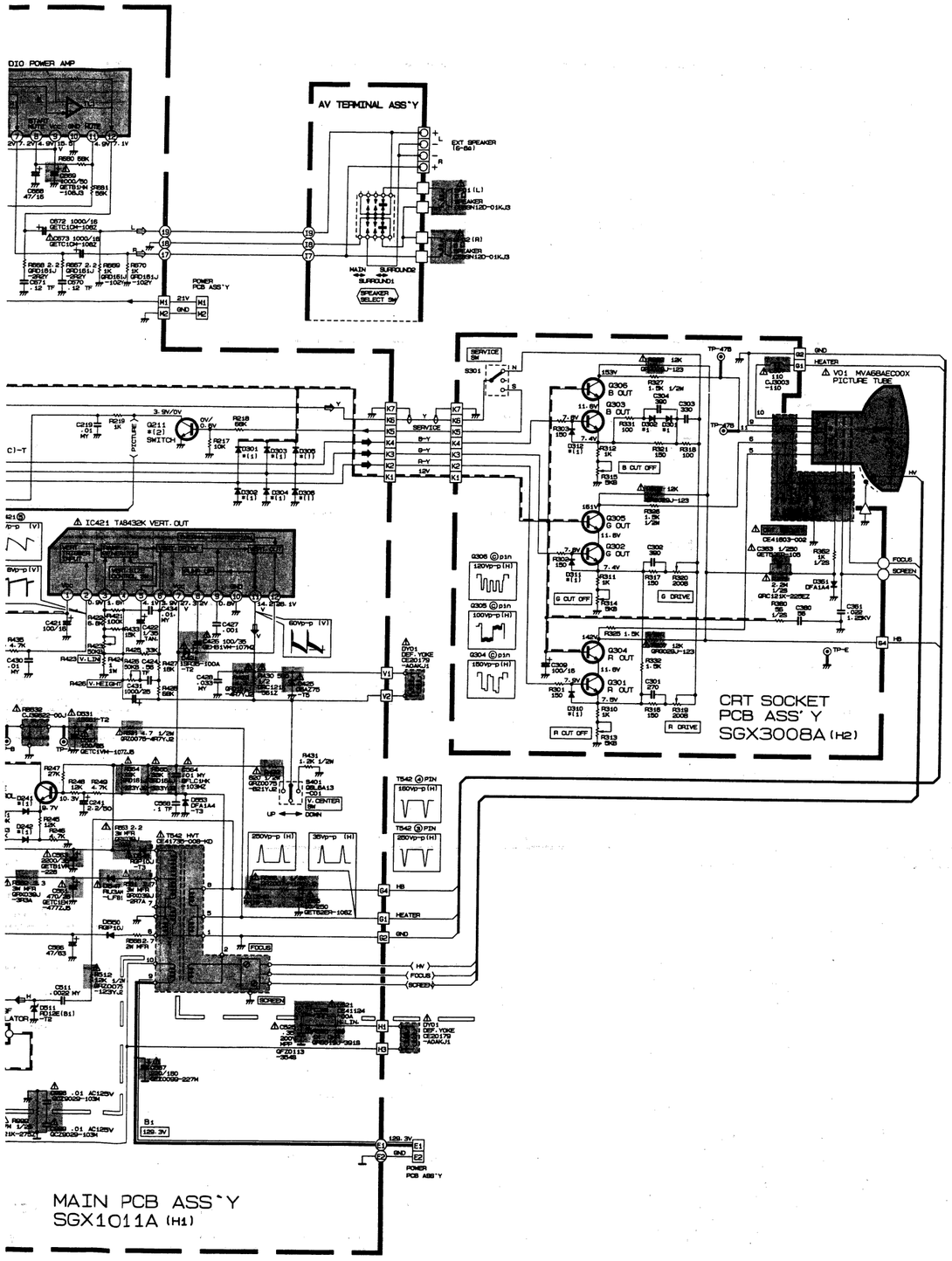
- *(1):DIODE=1SS133-T2
- *(2):NPN TRANSISTOR =2SC1740S(QR)-T
- *(3):PNP TRANSISTOR =2SA933S(QR)-T


AV TERMINAL ASS'Y
PIP INTERFACE PCB ASS'Y
STATUS
S-VIDEO IN
VIDEO
L/MONO AUDIO
LINE OUT
AUDIO OUT (VARIABLE)
AV COMPU LINK IN
VHF/UHF (75Ω)
TU701 CEEK253-A02-M VHF/UHF/CATV TUNER
IC001 TA78L005AP 5V REGULATOR
Q708 #(2) SWITCH
Q642 #(2) BUFFER
Q641 #(3) BUFFER
SGX-F004A IF MODULE
SIF DETECTOR
PLL DETECTOR
RF AGC
AFT
LIMITER
EQUALIZER
FM DETECTOR
BLACK NOISE CANCELLER
SOUND SAW FILTER
PICTURE SAW FILTER
NOISE
Q123 #(3) BUFFER
SGY6001A(H2) MTS PCB ASS'Y
SEPARATION
Q603 #(2) SWITCH
Q851 2SC1740S(Q) BUFFER
Q857 #(2) BUFFER
Q862 #(2) SWITCH
Q855 #(2) BUFFER
IC861 M51320P AV SELECT
IC821 LA7952 PIP SOURCE SWITCH
DRIVER
Q604 #(2) SWITCH
Q605 #(2) SWITCH
IC511 XRA1521BN AMP
IC511(1/2)
IC511(2/2)
Q865 2SC2878(B)-T SWITCH
Q863 2SC2878(B) SWITCH
Q854 #(3) SWITCH
MUTE
Q704 2SB774(RS)-T DETECTOR
Q703 2SB774(RS)-T DETECTOR
Q702 #(2) INVERTER
V. PULSE
H. PULSE
IC701 MN1872013JXR3 SENSOR CONTROL PROCESSOR
IC831 MN12C261D MEMORY
IC841 GP2U721Q REMOCON SENSOR
Q701 #(2) ON TIMER DRIVE
ON TIMER
IC702 MN1280-K RESET
Q782 #(3) SYNC. DETECTOR
Q781 #(2) BUFFER
Q791 2SC2655 (Y)-T REGULATOR
Q281 #(2) BUFFER
S701 S702 S703 S704 S705 S706
FUNCTION
UP
DOWN
VOL.A
VOL.V
CHANNEL/LEVEL
POWER
S707 VSH SERVICE SWITCH
IC831 MN12C261D MEMORY

Refer to the following PC Board pattern. : MAIN PCB PATTERN 2-25page, CRT SOCKET PCB PATTERN 2-27page.

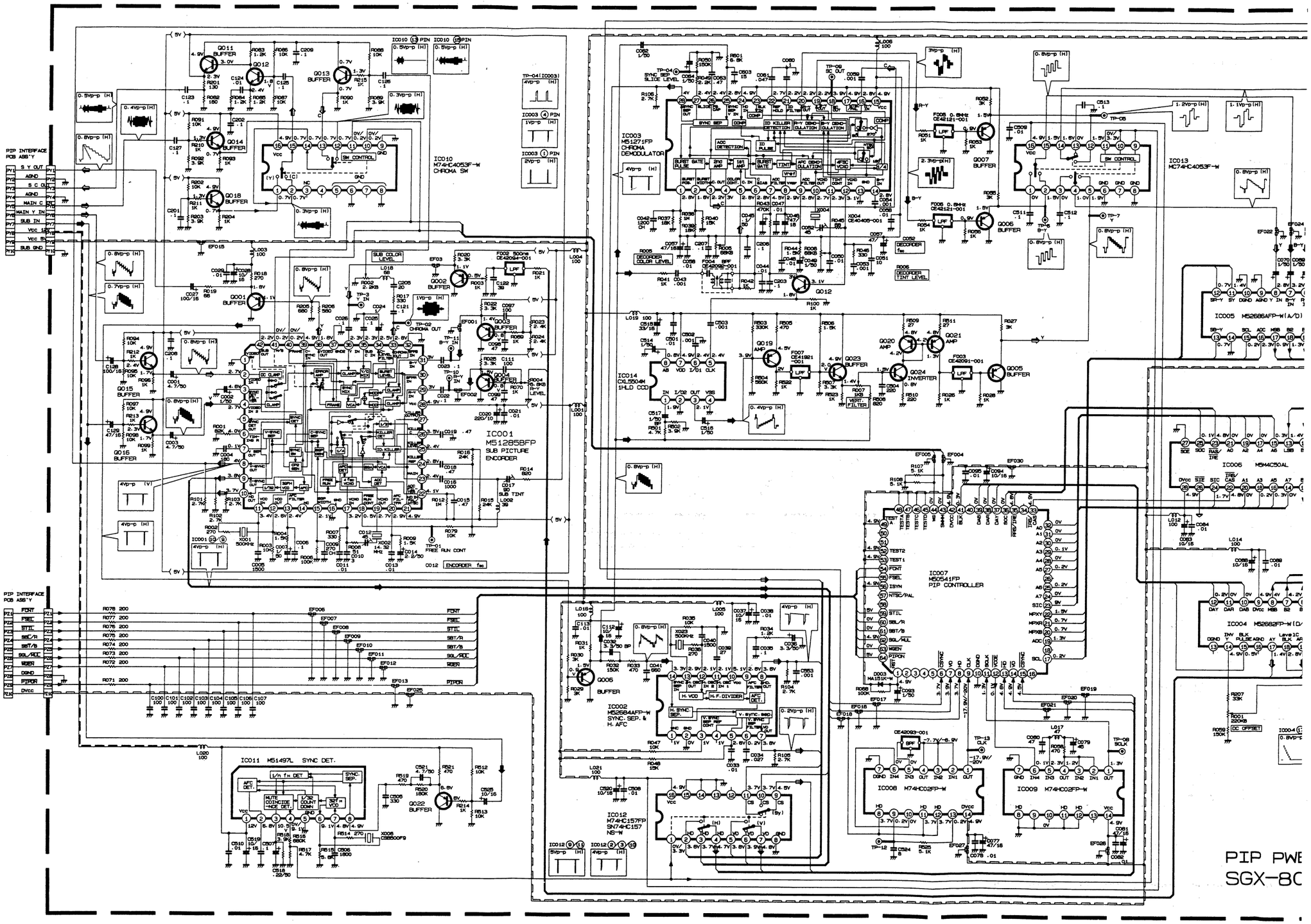


Refer to the following PC Board pattern. : MAIN PCB PATTERN 2-25page, CRT SOCKET PCB PATTERN 2-27page.



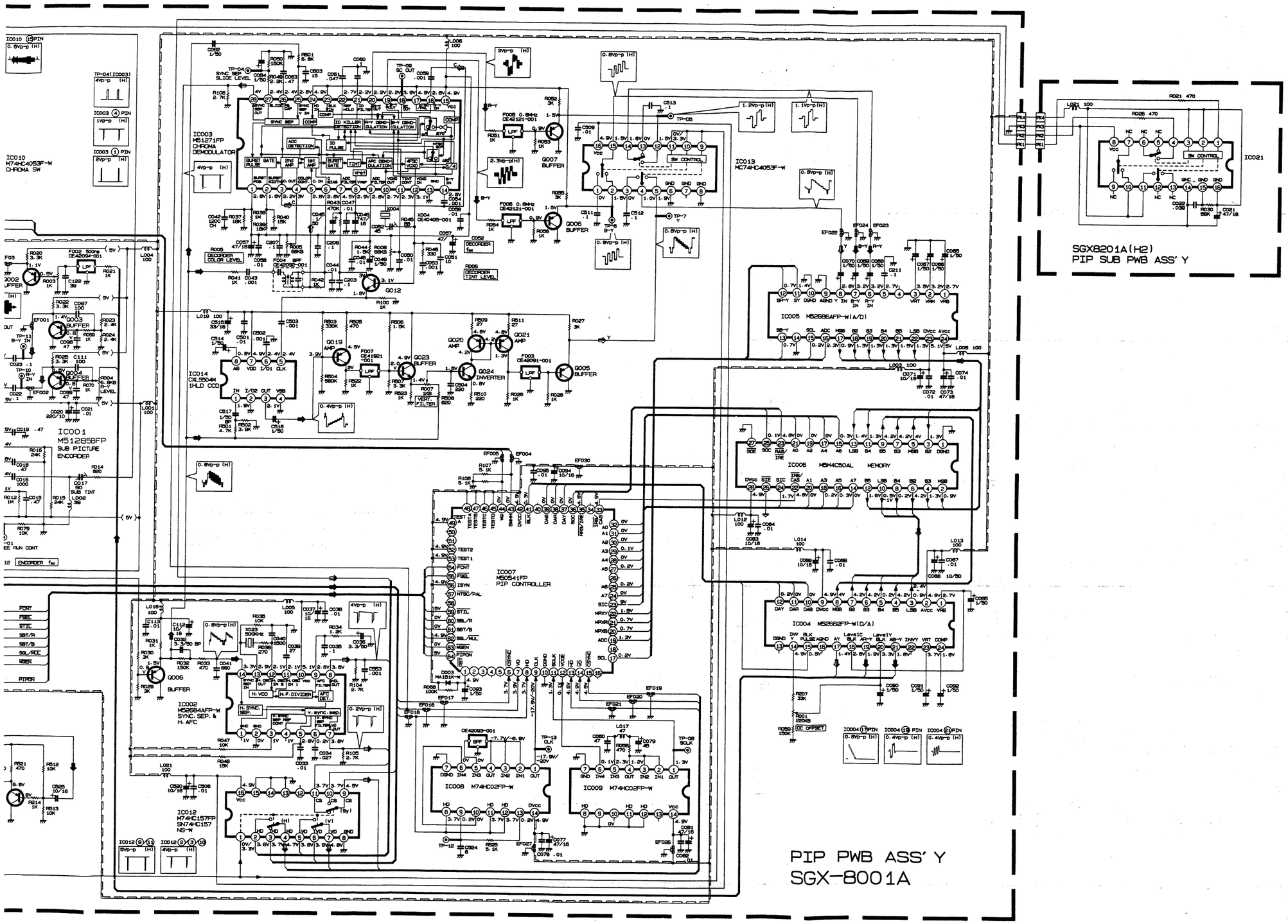
PIP PCB CIRCUIT DIAGRAM

Refer to the following PC Board pattern. : PIP PCB PATTERN 2-29 page,2-30 page.



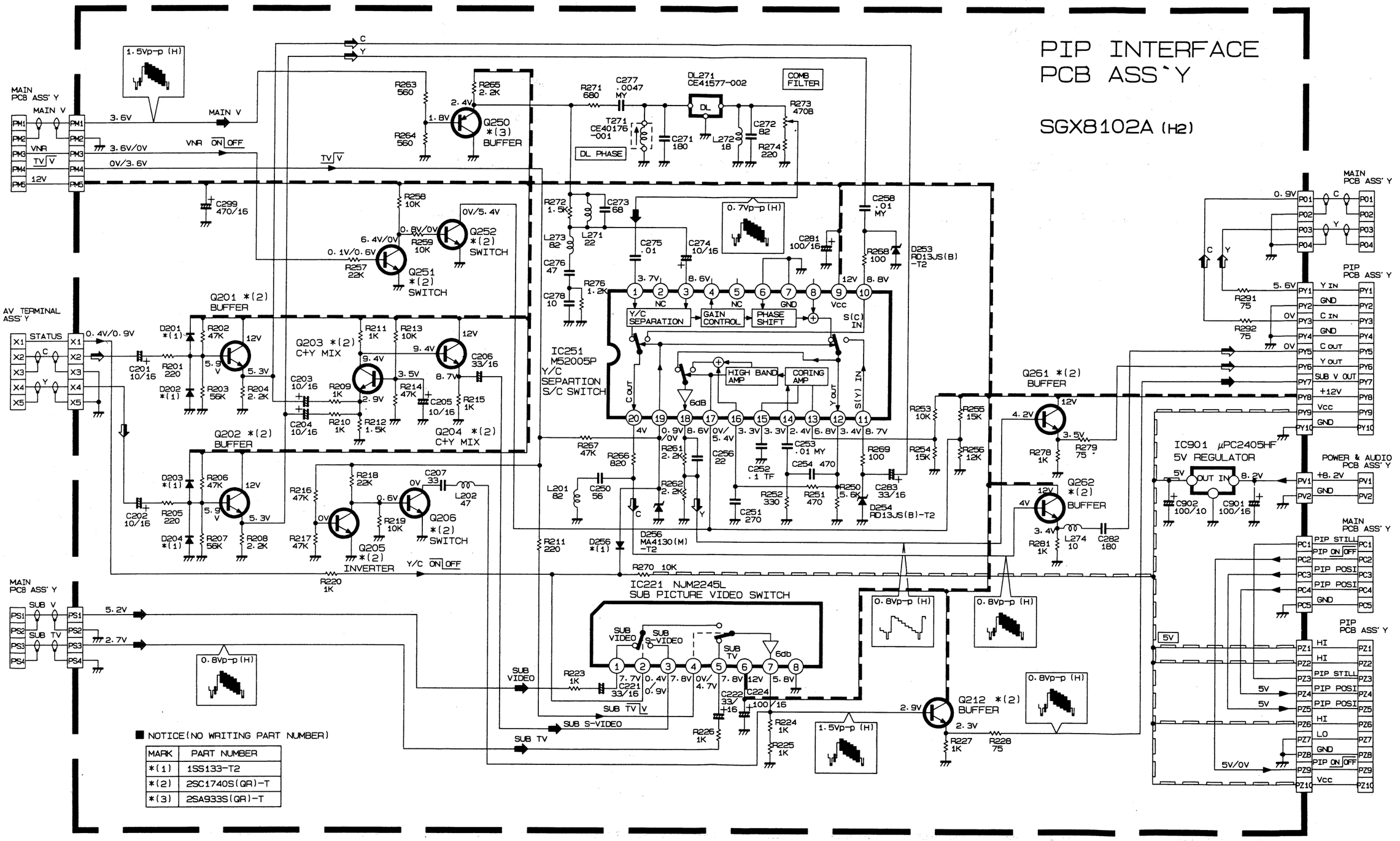
PIP PWE
SGX-8C

Refer to the following PC Board pattern. : PIP PCB PATTERN 2-29 page,2-30 page.



PIP INTERFACE PCB CIRCUIT DIAGRAM

Refer to the following PC Board pattern. : PIP INTERFACE PCB PATTERN 2-31 page.



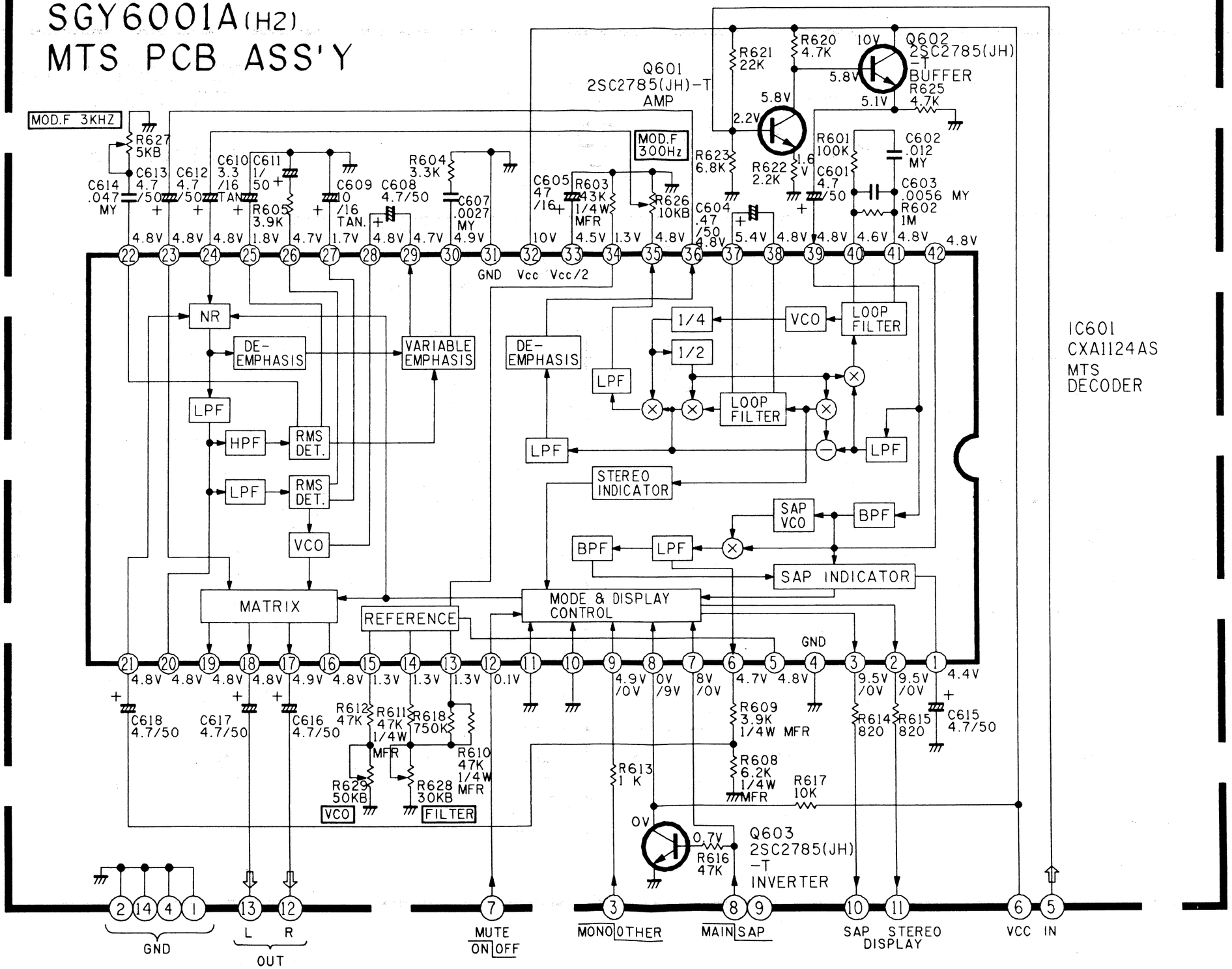
■ NOTICE(NO WRITING PART NUMBER)

MARK	PART NUMBER
*(1)	1SS133-T2
*(2)	2SC1740S(QR)-T
*(3)	2SA933S(QR)-T

MTS PCB CIRCUIT DIAGRAM

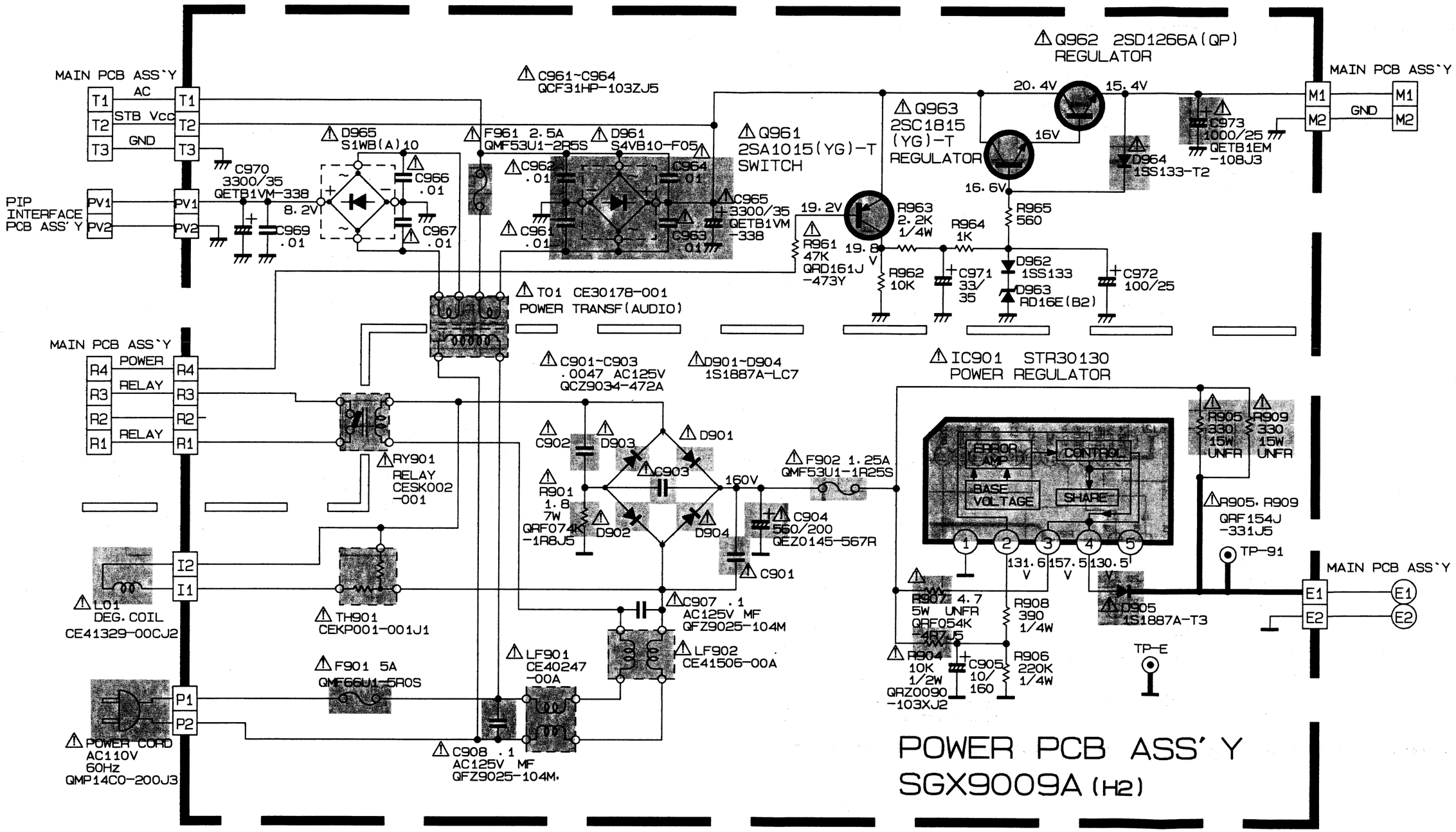
Refer to the following PC Board pattern. : MTS PCB PATTERN 2–28 page.

SGY6001A(H2)
MTS PCB ASS'Y

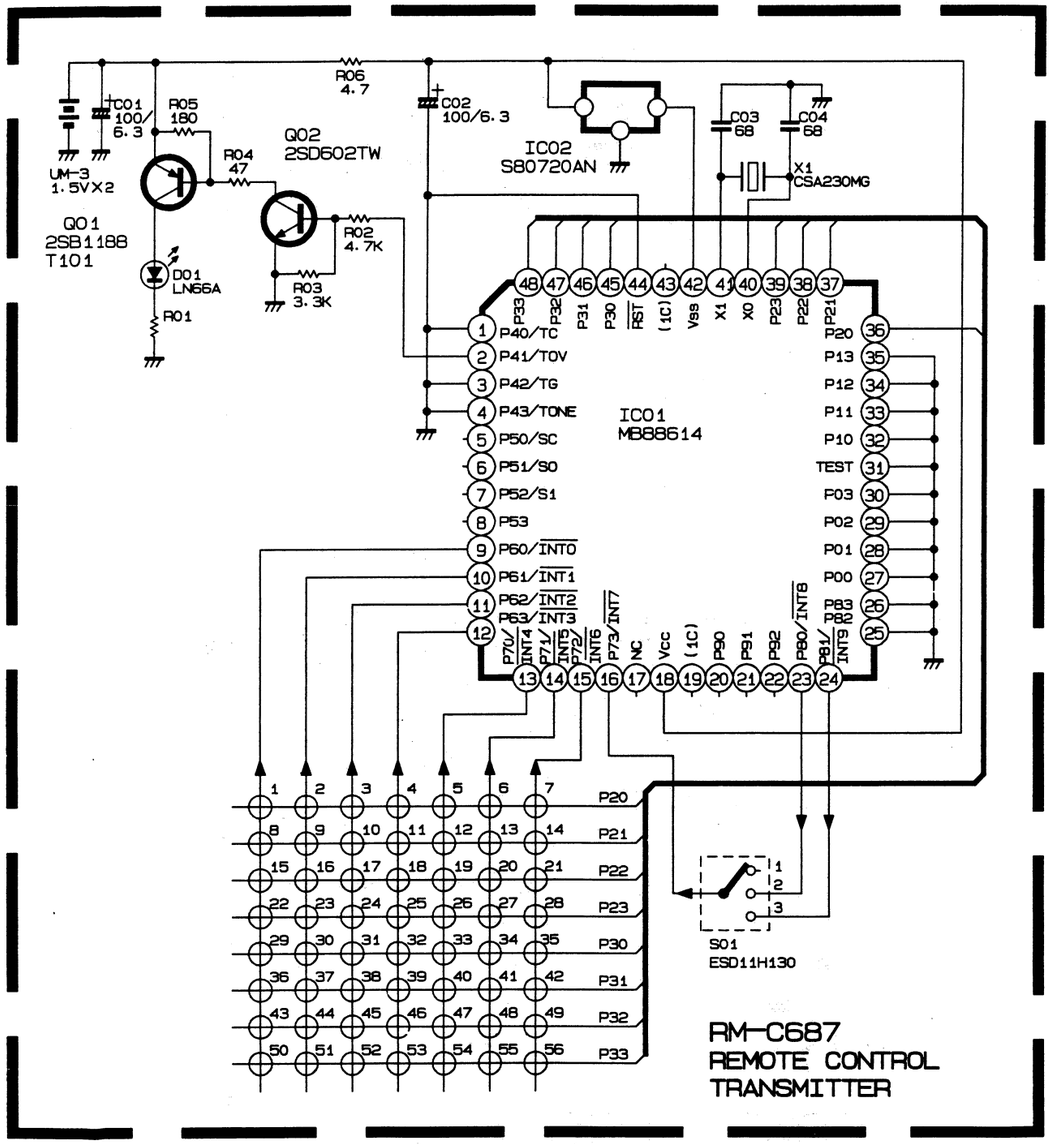


POWER PCB CIRCUIT DIAGRAM

Refer to the following PC Board pattern. : POWER PCB PATTERN 2-32 page.



REMOTE CONTROL TRANSMITTER CIRCUIT DIAGRAM [RM-C687-KD-H1]

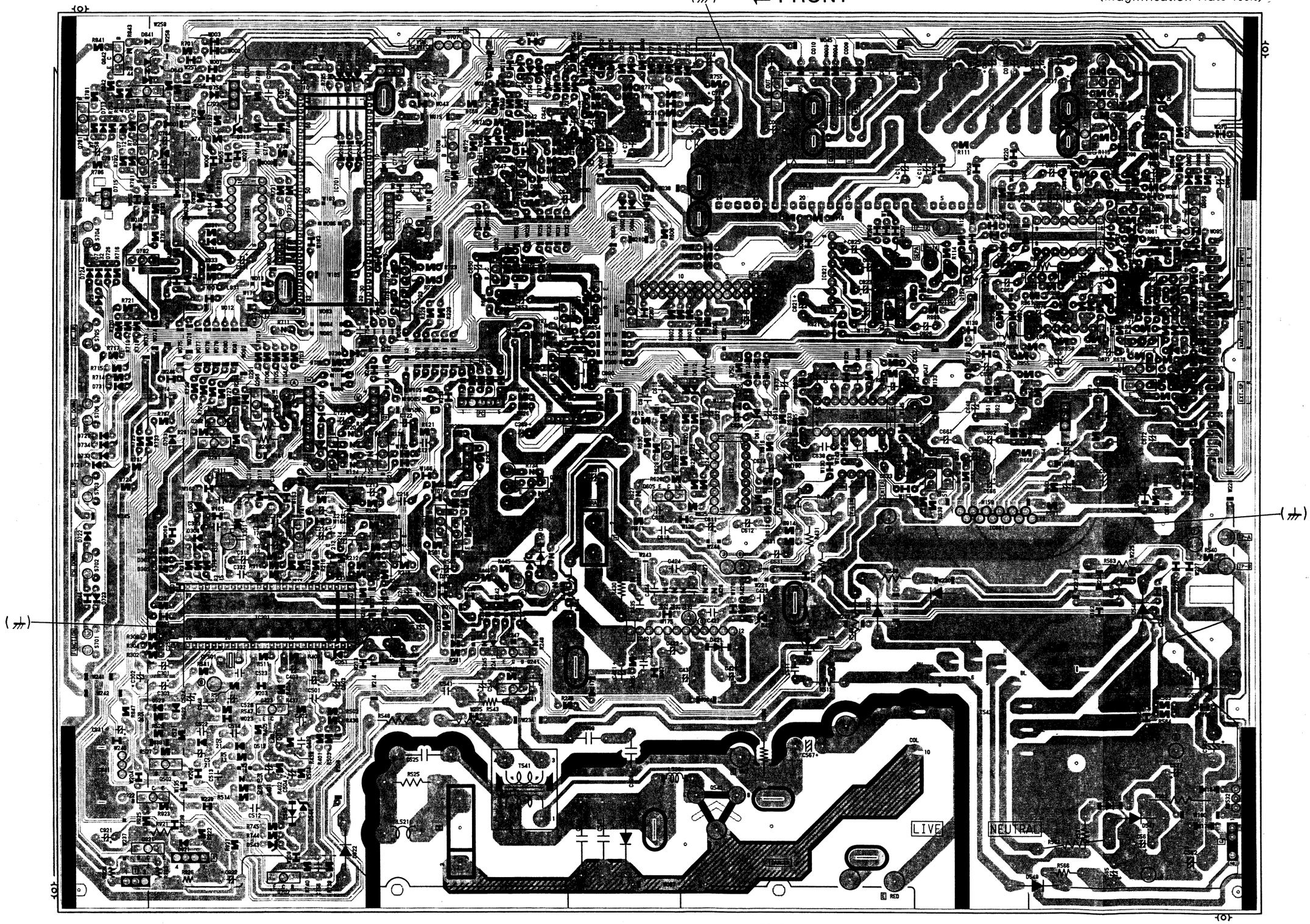


FUNCTION OF KEYS

Key No.	Key NAME	Key No.	Key NAME
1	MENU	27	5
5	PIP ON/OFF	28	6
6	HYPER	29	7
8	DISPLAY	30	8
9	ANT/CABLE	31	9
10	AV STATUS	32	RETURN
11	FUNCTION−	33	100+
12	FUNCTION△	36	POWER
13	FUNCTION▽	37	CHANNEL−
14	FUNCTION+	38	CHANNEL+
15	MUTE	43	VNR
16	VOLUME−	44	PIP SWAP
17	VOLUME+	45	MAIN/SAP
22	0	46	PIP POSITION
23	1	47	BIPHONIC
24	2	48	NOTCH
25	3	49	TV/VIDEO
26	4	50	CATEGORY

MAIN PCB PATTERN [SGX1011A(H2)]

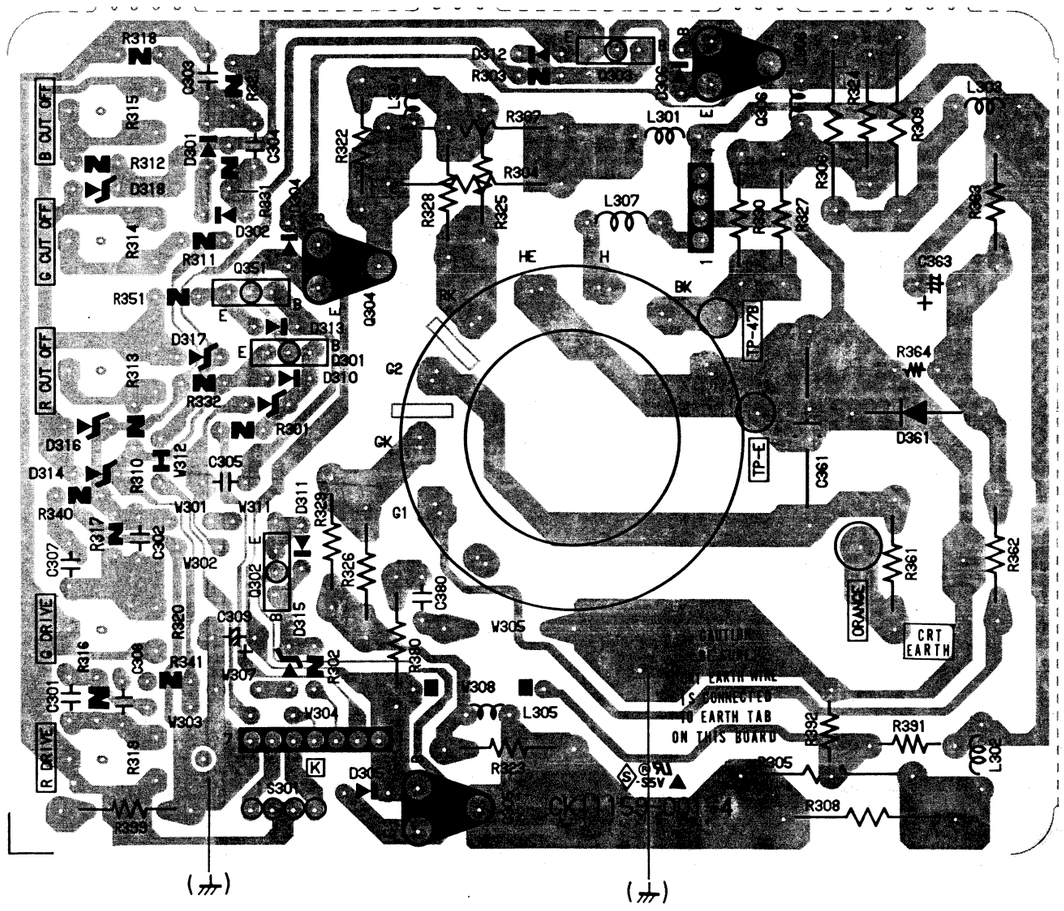
(Magnification Rate 100%)



CRT SOCKET PCB PATTERN [SGX3008A(H2)]

TOP

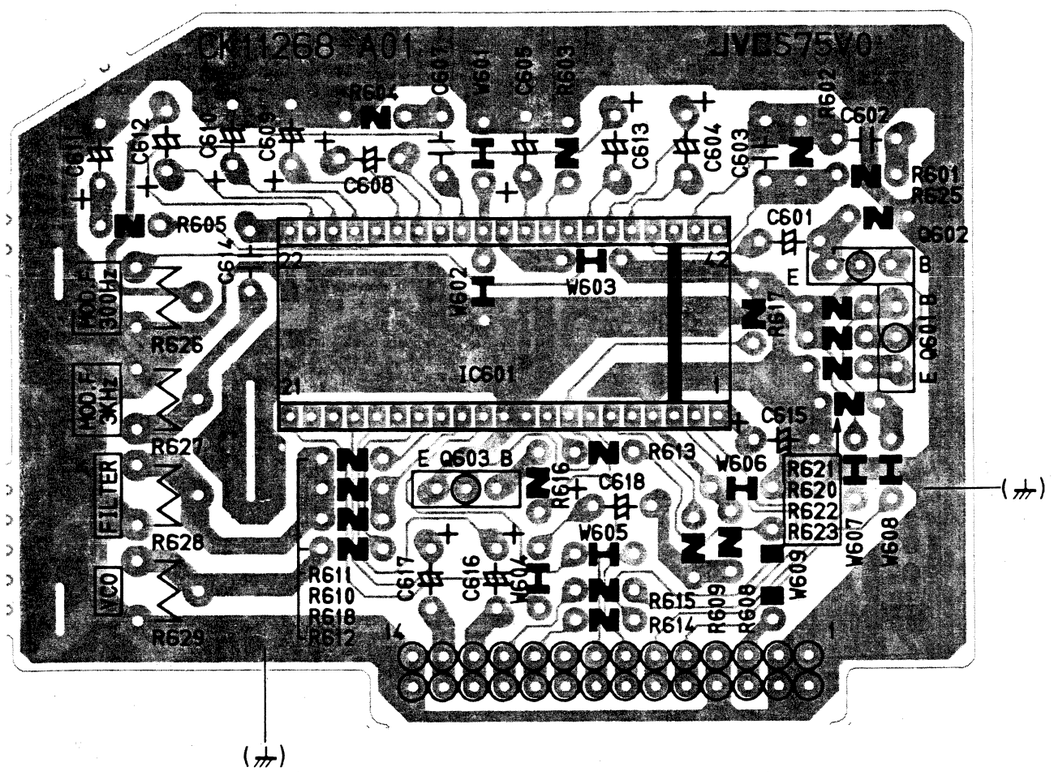
(Magnification Rate 144%)



MTS PCB PATTERN [SGX6001A(H2)]

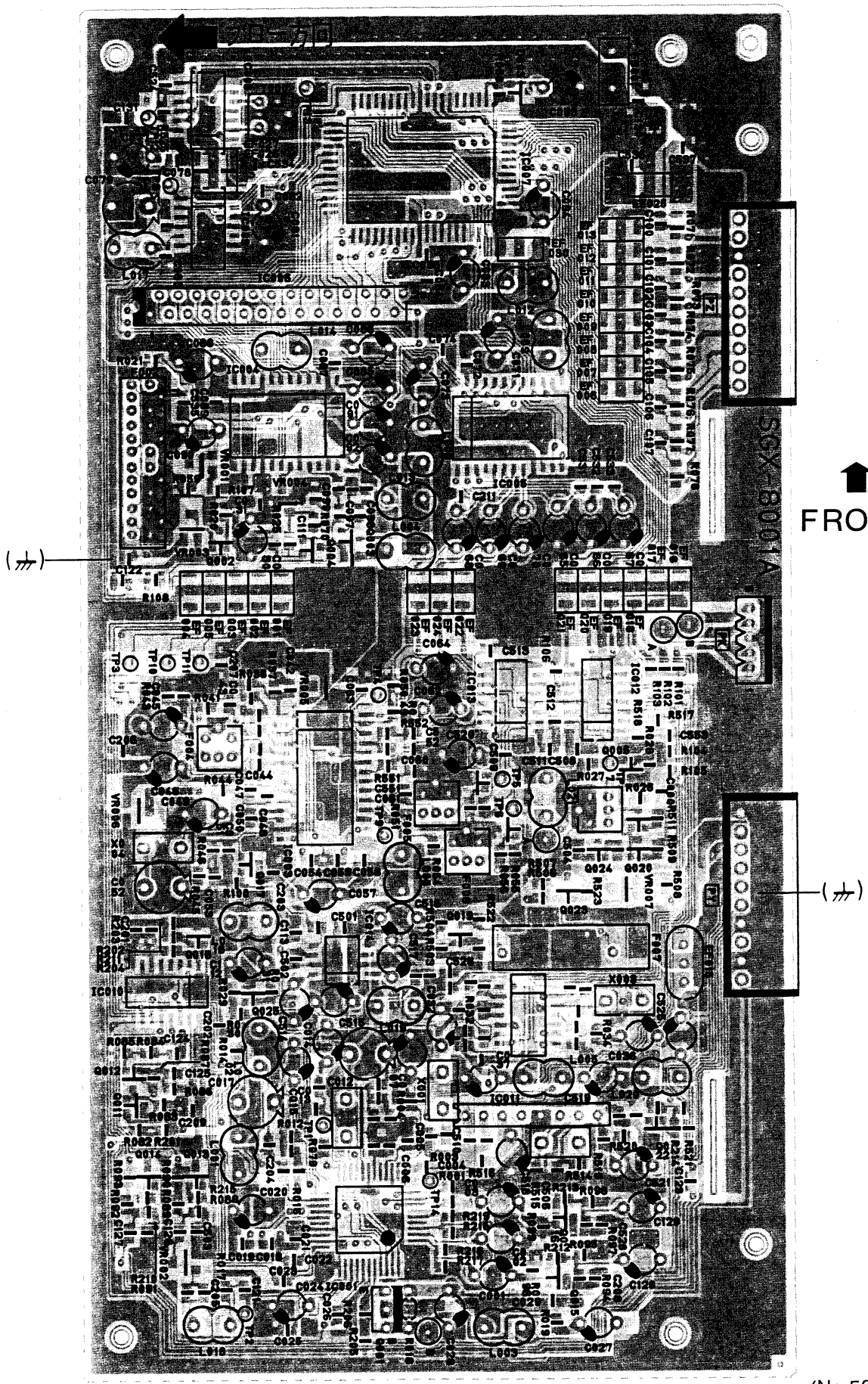
TOP

(Magnification Rate 200%)

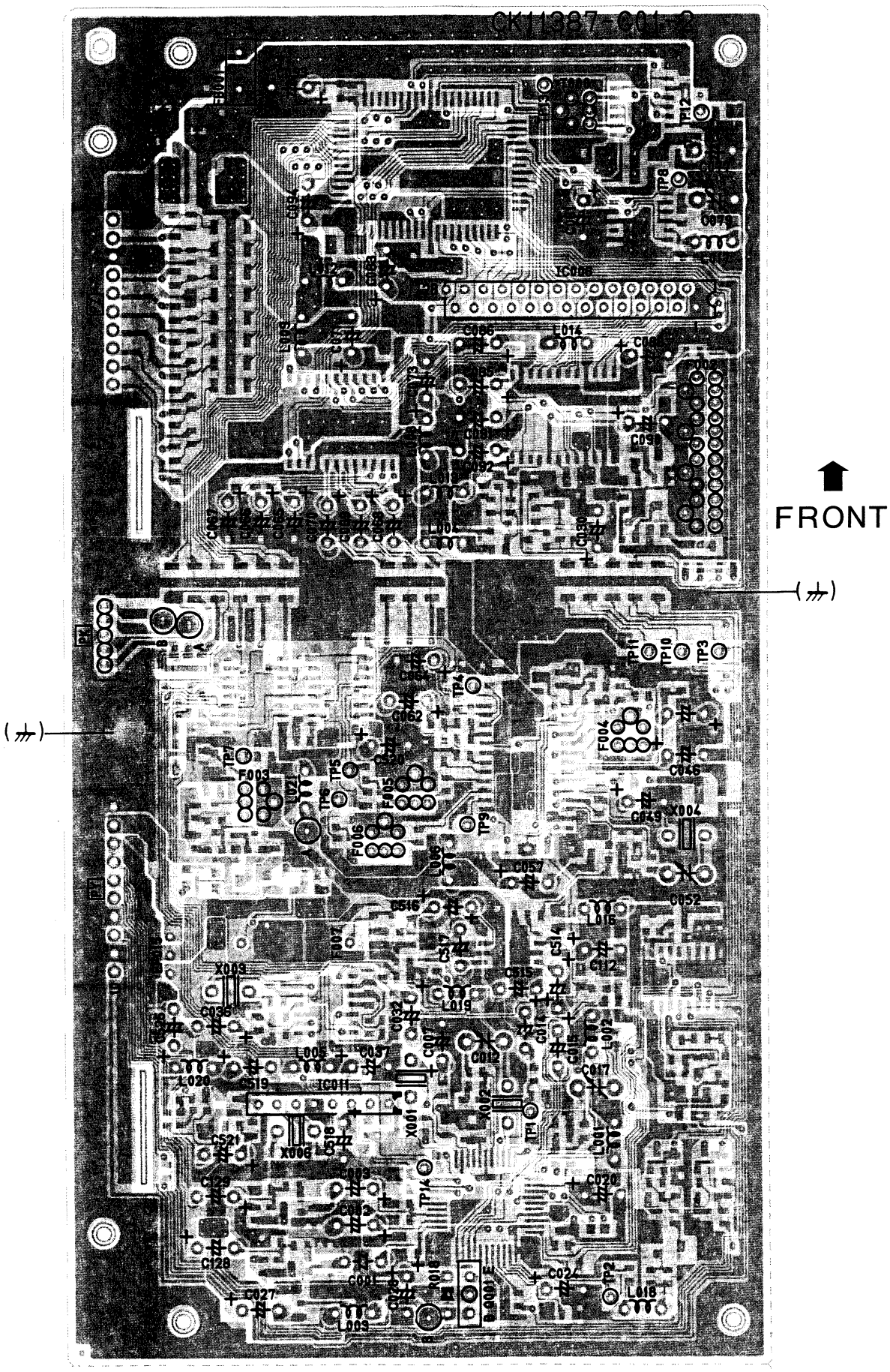


PIP PCB PATTERN [SGX-8001A]

(Magnification Rate 132%)

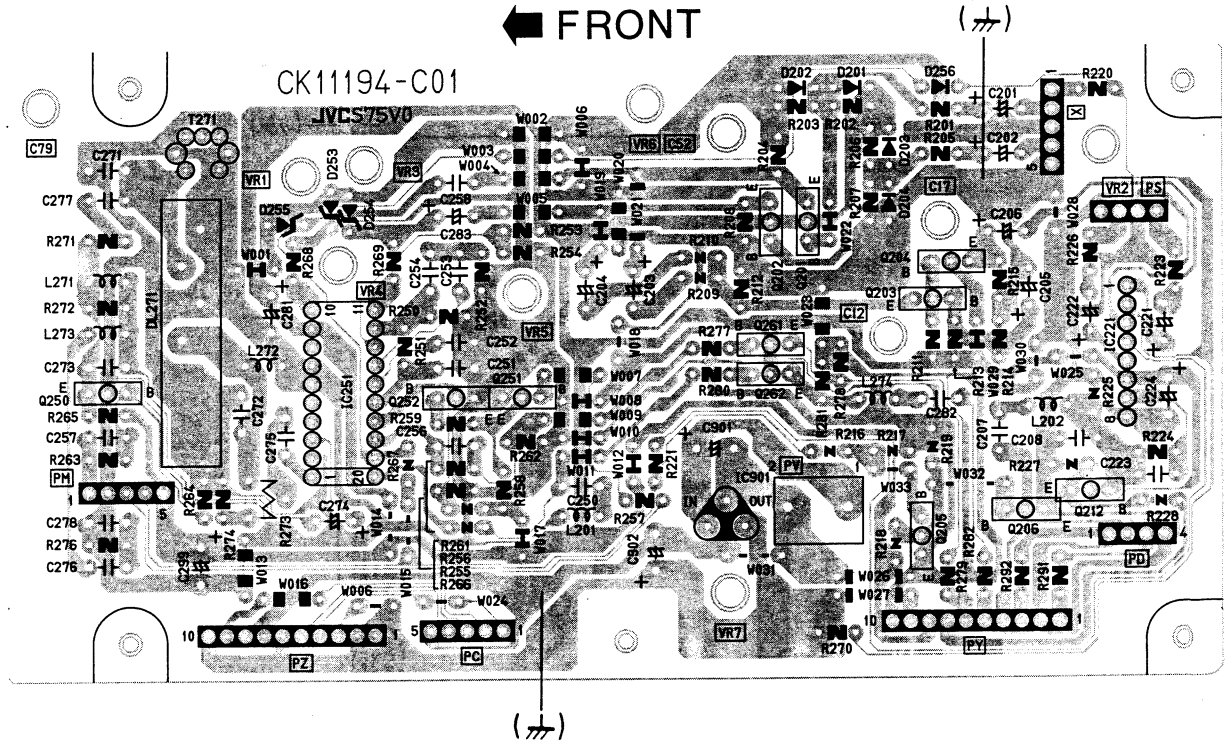


(Magnification Rate 132%)



PIP INTERFACE PCB PATTERN [SGX8102A(H2)]

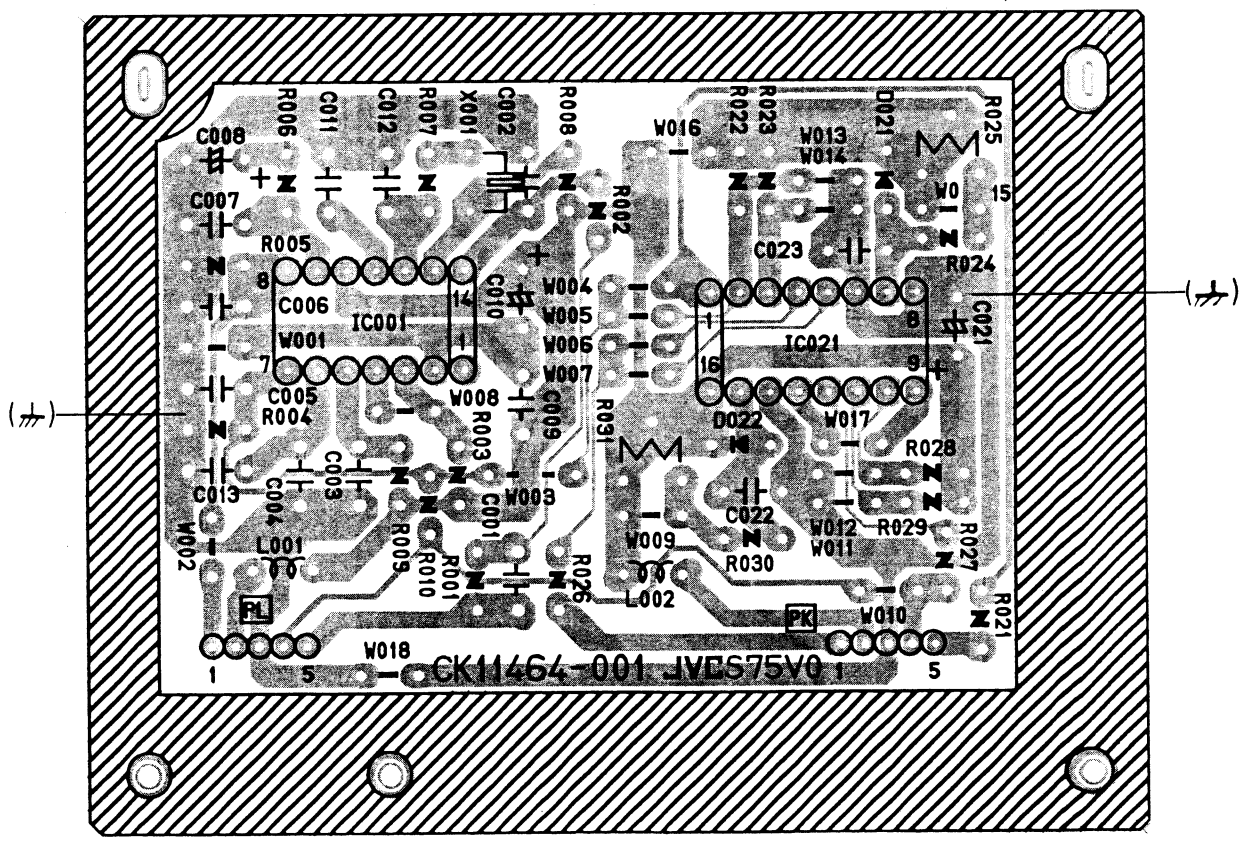
(Magnification Rate 100%)



PIP SUB PCB PATTERN [SGX8201A(H1)]

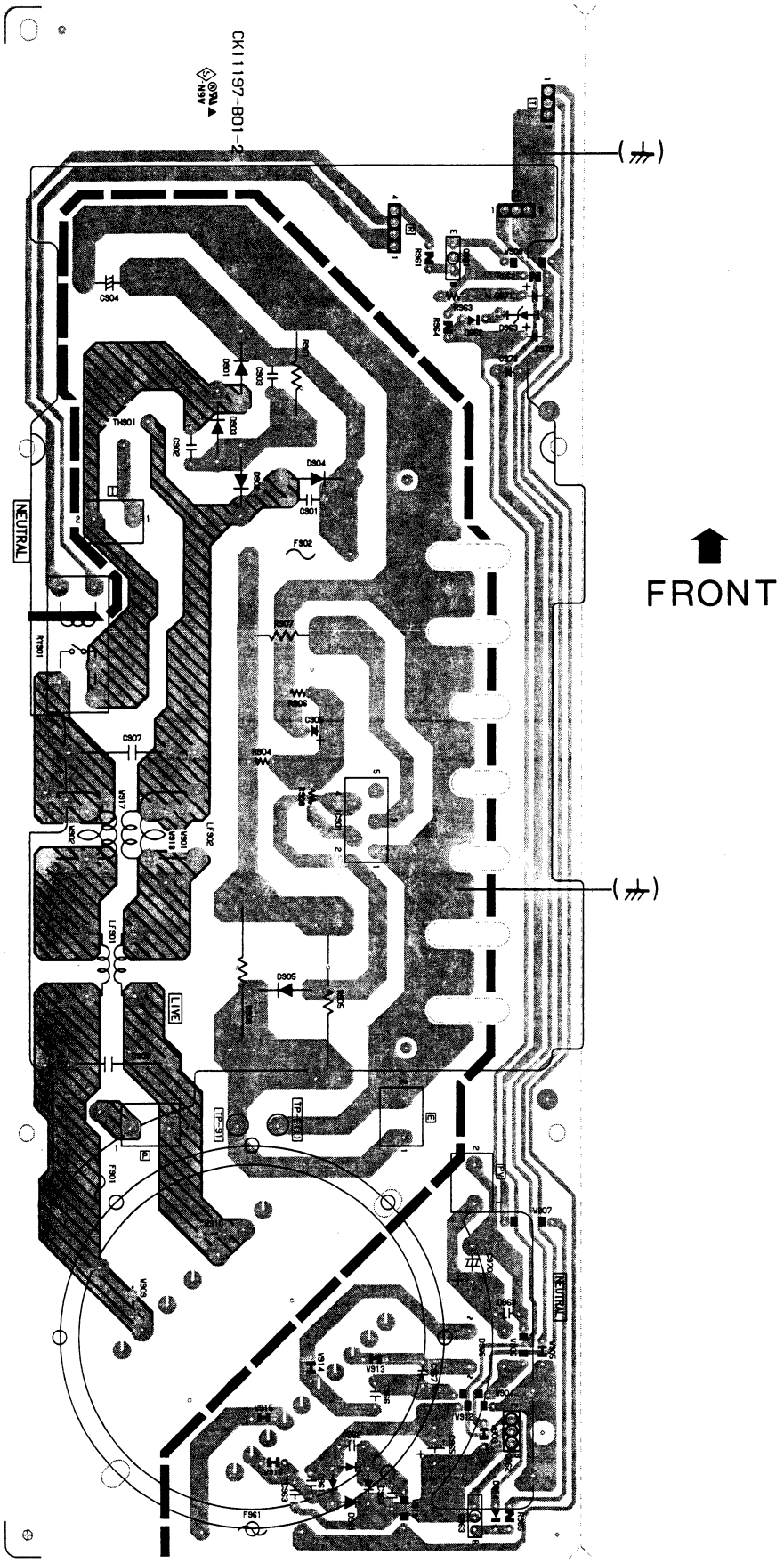
FRONT

(Magnification Rate 158%)



POWER PCB PATTERN [SGX9009A(H2)]

(Magnification Rate 72%)



VP
TN